

CUMULATIVE EFFECTS

The widest area considered in the tables below is the group of watersheds (6th Code HUCs) in and adjacent to the Cabin Gulch project area. This represents the largest cumulative effects area required for most resources, except that needed for certain wildlife species. All activities are sorted by decade. Information on past activities beyond the HUC areas is available from the North Belts Travel Plan analysis. Harvest/fire records prior to 1950 are not available. Harvest and fire are sorted in the table below by the Cabin Gulch Project Area boundary, and by HUC boundaries. Harvest activities are sorted by intermediate and regeneration treatments (see definitions, separate attachment). "Fuels activities" includes prescribed fire (w/ hand slashing), and jackpot burning. Timber harvest and/or fire acres could overlap on the same piece of ground; refer to GIS map for clarification. Current stand conditions are reflected in existing condition reports by resource area.

FIRE REGIME CONDITION CLASS

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	The existing condition reflects the areas that were cut in these sales. The sales likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Forest Service Timber Harvest	1960-1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	The existing condition reflects the areas that were cut in these sales. The sales likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek)	The existing condition reflects the areas that were burned. The fires likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
			Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	early seral stands or open grown stands.
Forest Service Timber Harvest	1970-1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	The existing condition reflects the areas that were cut in these sales. The sales likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	The existing condition reflects the areas that were burned. The fires likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Forest Service Timber Harvest	1980-1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	The existing condition reflects the areas that were cut in these sales. The sales likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	The existing condition reflects the areas that were cut in these sales. The sales likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands. Private land was not included in the FRCC analysis.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	The existing condition reflects the areas that were burned. The fires likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Forest Service Timber Harvest	1990-1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	The existing condition reflects the areas that were cut in these sales. The sales likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	The existing condition reflects the areas that were burned. The fires likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Mining		Hand-scale placer mining only		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005 included seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 acres) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects</i>	The existing condition reflects the areas that were cut in these sales. The sales likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
			<i>boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: 1,252 acres	
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: 8,058 acres	The existing condition reflects the areas that were burned. The fires likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Deep Creek Hazard Fuels	2004-present	Cabin Gulch Project Area (Hand thin & burn) Fuels Activities 87 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: 511 acres	The existing condition reflects the areas that were burned. The fires changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands.
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime Condition Class.
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	The existing condition reflects the ongoing grazing in the area.
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.	This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.	This was an activity that did not affect vegetation in such a way that it would affect Fire Regime
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.	This was an activity that did not affect vegetation in such a way that it would affect Fire Regime

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.		This was a small scale activity that did not affect enough acres to have an adverse impact on Fire Regime
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres	The existing condition reflects the areas that were cut in these sales. The sales likely changed the fire regime condition class in the area at the time by reducing the amount of closed canopy stands and creating either early seral stands or open grown stands. Private land was not included in the FRCC analysis.
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		This was an activity that did not affect vegetation in such a way that it would affect Fire Regime
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		This was an activity that did not affect vegetation in such a way that it would affect Fire Regime

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock.	This is an activity that did not affect vegetation in such a way that it would affect Fire Regime ratings
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	This activity could change some Fire regime ratings in some grassland or shrublands but at a very small scale.
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	This is an activity that did not affect vegetation in such as way that it would affect Fire Regime ratings

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	This is an activity that did not affect vegetation in such a way that it would affect Fire Regime ratings
Forest Wide Hazardous Tree removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	This is an activity that did not affect vegetation in such a way that it would affect Fire Regime ratings

FIRE/FUELS

The scale used is the South Belts analysis area except for the private land harvest under on-going activities. The acreages for the Maudlow/Toston Fire are across all ownerships for the South Belts analysis area. Most activities have little influence on fire/fuels, with the exception of harvest and fuel activities that have changed the vegetation. FlamMap model outputs were utilized to determine how harvest and fuel activities have influenced current crown fire activity within those same treatment boundaries. It is appropriate to use FlamMap crown fire activity outputs at this scale as the outputs are computed pixel by pixel. It is important to remember that FlamMap was modeled with 2000 weather inputs, which represents a worst case scenario in which a fire may escape initial attack and become large. Crown fire activity would be less severe given more moderate weather conditions and fuel moistures.

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Gulch Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	South Belts Analysis Area 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	Timber harvests that occurred during this decade were of a very small scale within the analysis area. FlamMap shows these acres burning almost exclusively as surface fire or passive crown fire (refer to crown fire activity/past activities maps in the project file).
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		No appreciable effect to fire/fuels.
Forest Service Timber Harvest	1960 - 1969	Cabin Gulch Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	South Belts Analysis Area 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 128 acres Intermediate harvest: <u>112 acres</u> Total: 1,570 acres	FlamMap shows these acres burning almost exclusively as surface fire or passive crown fire with a few isolated areas of crown fire (refer to crown fire activity/past activities maps in the project file).

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	1960-1969	Cabin Gulch Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	South Belts Analysis Area 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>150 acres</u> Total: 234 acres	Fuels activities that occurred during this decade were of a very small scale within the analysis area. The majority of the acres (175) were jackpot burning of activity fuels which reduces harvest debris but does not reintroduce fire as an ecosystem process. FlamMap shows these acres burning almost exclusively as surface fire or passive crown fire with one area of crown fire (refer to crown fire activity/past activities maps in the project file).
Forest Service Timber Harvest	1970-1979	Cabin Gulch Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	South Belts Analysis Area 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>142 acres</u> Total: 595 acres	FlamMap shows these acres burning almost exclusively as surface fire or passive crown fire with a few isolated areas of crown fire (refer to crown fire activity/past activities maps in the project file).
Fire	1970-1979	Cabin Gulch Project Area Total: 0 acres	South Belts Analysis Area 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	The 6 acres treated were a broadcast burn of activity fuels, but due to the limited acreage did not help to reintroduce fire as an ecosystem process. Fuels activities that occurred during this decade were of a very small scale within the analysis area. FlamMap shows these acres burning mostly as passive crown fire (refer to crown fire activity/past activities maps in the project file).
Forest Service Timber Harvest	1980-1989	Cabin Gulch Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	South Belts Analysis Area 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 4 acres Intermediate harvest: <u>49 acres</u> Total: 1,102 acres	FlamMap shows these acres burning almost exclusively as surface fire or passive crown fire with a few isolated areas of crown fire (refer to crown fire activity/past activities maps in the project file).

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Private land timber harvest	1980-1989	Cabin Gulch Project Area Intermediate harvest: 70 acres	South Belts Analysis Area 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	A spatial polygon for this harvest is not available; therefore it is difficult to discern the fire behavior. This is a minor amount of acres within the analysis area and therefore is not critical to landscape fire behavior.
Fire	1980-1989	Cabin Gulch Project Area Total: 0 acres	South Belts Analysis Area 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	Fuels activities that occurred during this decade were of a very small scale within the analysis area. FlamMap shows these acres burning almost exclusively as surface fire although there are some areas with no fire behavior data (refer to crown fire activity/past activities maps in the project file).
Forest Service Timber Harvest	1990 – 1999	Cabin Gulch Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	South Belts Analysis Area 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>43 acres</u> Total: 187 acres	FlamMap shows these acres burning almost exclusively as surface fire or passive crown fire with very few isolated areas of crown fire (refer to crown fire activity/past activities maps in the project file).
Fire	1990-1999	Cabin Gulch Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	South Belts Analysis Area <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acre 803 (North Fork Deep Creek) Fuels activities <u>1 acres</u> Total: 2 acres	Fuels activities that occurred during this decade were of a very small scale within the analysis area. FlamMap shows these acres burning almost exclusively as passive crown fire and crown fire with some surface fire inclusions (refer to crown fire activity/past activities maps in the project file).
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		No appreciable effect to fire/fuels.
Mining		Hand-scale placer mining only		No appreciable effect to fire/fuels.
Forest Service Timber Harvest	2000-present	Cabin Gulch Project Area Total: 0 acres	South Belts Analysis Area <i>Maudlow-Toston Salvage, 2003-2005 included seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: <u>Grassy Bugs Salvage '04</u> (200 acres) & <u>Greyson Bugs '05-'07</u> (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>868 acres</u> Total: 868 acres	FlamMap shows these acres burning almost exclusively as surface fire or passive crown fire with very few isolated areas of crown fire (refer to crown fire activity/past activities maps in the project file).

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Maudlow/Toston Fire (2000) and Bear Gulch Fire (2008)	2000-present	Cabin Gulch Project Area Maudlow/Toston Fire 198 acres Bear Gulch Fire <u>617 acres</u> Total: 815 acres	South Belts Analysis Area Maudlow/Toston Fire (2000) - 81,691 acres total, not all within effects boundaries) Maudlow-Toston Fire 7,845 acres Bear Gulch Fire <u>683 acres</u> Total: 8,528 acres	FlamMap shows the area of the Maudlow/Toston Fire burning almost exclusively as surface fire or passive crown fire with very small inclusions of crown fire (refer to crown fire activity/past activities maps in the project file). The area of the Bear Gulch fire is almost entirely dead trees and will respond with grass (fuel model 102) and some shrub (fuel model 122) growth. Crown fire will not be a threat in these areas.
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		Minimal effect to fire/fuels depending on grass growth. An increase in grass cover versus bare ground will increase rate of spread and flamelengths.
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		No appreciable effect to fire/fuels.
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.		No appreciable effect to fire/fuels.
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.		No appreciable effect to fire/fuels.
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.		No appreciable effect to fire/fuels.
Bear Gulch Fire Suppression Activities	2008	Dozer Line: 5.5 miles of dozer line was constructed, including FS and private land (10 acres), average 15' wide. This consisted of road improvement on 3.1 miles of Bear Gulch road, and new construction of 2.4 miles on the S/SE edge of fire. 0.03 miles occurs in Unit 24f; 0.1 miles in 24g; 0.3 miles in 24h; 0.2 miles in 24i, and 0.3 miles in 24j. Total acres affected by dozer line within treatment units is 1.85. Hand Line: 7.9 miles of handline was constructed, including FS and private land, average 1.5' wide. No hand line occurred within proposed units.		No appreciable effect to fire/fuels, although road improvement work should improve access by engines.
Bear Gulch Rehabilitation	2008	Dozer Line: All dozer line was rehabilitated. Activities included scarification of running surfaces to a depth of at least 4"; sidecast material pulled & reshaped to natural ground contours; topsoil in berms spread across scarified/re-contoured surface; downed woody material placed on re-countoured surface, where available; re-seeded all exposed surfaces; water bars installed following standard specifications. Hand Line: All hand line was rehabilitated. Activities included pulling berms into hand line and line restored to blend with undisturbed soil contours; limbs and tops scattered across line; water bars installed according to standard spacing specifications.		No appreciable effect to fire/fuels.

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Deep Creek Hazard Fuels	2004-present	Cabin Gulch Project Area (Hand thin & burn) Fuels Activities 87 acres South Belts Analysis Area 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: 511 acres	These activities are removing ladder fuels where present and then underburning in timber in addition to burning grasslands and sagebrush. FlamMap shows these acres burning almost exclusively as surface fire (refer to crown fire activity/past activities maps in the project file).
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.	No appreciable effect to fire/fuels.
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	No appreciable effect to fire/fuels.
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	No appreciable effect to fire/fuels.
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.	No appreciable effect to fire/fuels.
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	Grazing reduces herbaceous loading which can reduce fire spread. This should not change fire behavior from the existing condition nor would it change with implementation of any alternative. There should be minimal effect to fire/fuels.
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	No appreciable effect to fire/fuels.
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	No appreciable effect to fire/fuels.
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	No appreciable effect to fire/fuels.
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.	No appreciable effect to fire/fuels.
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.	No appreciable effect to fire/fuels.
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.	No appreciable effect to fire/fuels, although vehicle access may be improved.
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.	No appreciable effect to fire/fuels.
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.	No appreciable effect to fire/fuels.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.		As this is outside of the fire season for the Helena National Forest, there should be minimal effects to fire/fuels.
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.		There should be no change for engine access if a road is closed and gated, as access is approved for fire suppression activities. Minimal effect to fire/fuels.
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.		No appreciable effect to fire/fuels.
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	<p>By HUCs</p> <p>801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres</p> <p>802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres</p> <p>803 (North Fork Deep Creek) Intermediate harvest: 192 acres</p> <p>804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u></p> <p>Total: 5,021 acres</p> <p>Note: These acres represent the entire harvest acres occurring within these four HUCs. The South Belts analysis area does not include all of Upper Deep Creek and Russell Fork Deep Creek HUCs. Not enough information is available to clip these harvests to the South belts analysis area so the entire four HUCs were analyzed. A map of the harvest units is not available in the project file.</p>	<p>Within the analysis area, the regen harvest would most likely convert those areas to fuel model 122. This would add diversity to the landscape, as this is not a dominant fuel model in area. FM 122 has a moderate flame-length and high rate of spread. The rate of spread is most likely higher than pre-harvest as fire tends to move quickly through shrublands. Flame-lengths may be the same or higher post-harvest depending on the fuel models that were present prior to treatment. Slash disposal will also affect fire behavior. If slash produced from harvest is carried off-site, piled onsite and burned, or left onsite and underburned than fire behavior should be as modeled with FM 122. If slash is left onsite and not burned this will leave fine woody debris and coarse woody debris in the harvested units. The fine woody debris will increase flamelengths and rate of spread if a fire were to occur. The coarse woody debris will increase fire residence time and may affect duff and litter consumption and soil heating. This fuel model would probably last 10 to 20 years and then would convert to a timber fuel model. The intermediate harvest will decrease tree density and therefore canopy bulk density. This should decrease the potential for sustaining a crown fire. This harvest should decrease the critical surface flamelength for the landscape which will decrease the potential for a surface fire to transition to a crown fire. If the treatment is precommercial thinning, this may not change the critical surface flamelength, refer to Appendix B of the Fuels report in the project file. The fuel model may change with intermediate harvest</p>

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
			depending on the current fuel model and the prescription.
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.	No appreciable effect to fire/fuels.
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.	An increase in people living in the wildland/urban interface usually increases the amount of fire starts from activities such as debris burning, etc. This would add to the fire suppression workload and may result in a large fire if it escaped initial attack.

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock.	Grazing reduces herbaceous loading which can reduce fire spread. This should not change fire behavior from the existing condition nor would it change with implementation of any alternative. There should be minimal effect to fire/fuels.
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	Grazing reduces herbaceous loading which can reduce fire spread. This should not change fire behavior from the existing condition nor would it change with implementation of any alternative. There should be minimal effect to fire/fuels.
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No appreciable effect to fire/fuels.
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No appreciable effect to fire/fuels.
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	Removal of hazardous trees and fuels can reduce fire spread. This should not change fire behavior from the existing condition nor would it change with implementation of any alternative.

FORESTED VEGETATION

Past (P), present (C) and reasonably foreseeable (F) actions were considered to determine the potential for cumulative effects on sustainable forest conditions. 6th code HUC boundaries within and adjacent to the Cabin Gulch project area comprise the cumulative effects boundary; the incremental contribution of this proposal is negligible at a larger scale. The information is found in FACTS. It is possible that other activities prior to the 1950's have occurred that are not documented. Undocumented activities at this scale would have a negligible and immeasurable effect to the forest resource when cumulatively considered with the proposal. With respect to forest vegetation, decades of vegetation treatments are grouped.

A brief discussion of past harvest and regeneration success specifically within the Cabin Gulch project area is pertinent to the silviculture resource. Within this boundary, about 2,753 acres have been previously harvested (18%). Intermediate treatments represent 804 acres, or 5%, while regeneration harvests comprise 1,949 acres (13%). This 13% represents a minor mosaic of younger forest structures on the Cabin Gulch landscape which is otherwise dominated by mature forest. Reforestation is required by NFMA within 5 years after regeneration harvest. According to reforestation status listed in FACTS, 74% of the regeneration harvests in the Cabin Gulch area are now fully certified as regenerated; about 18% are progressing or have satisfactory natural site preparation, and 8% have no status listed (database error). No stands have failing regeneration. Past harvest units were regenerated with conifers, and today those stands range from seedlings to pole-sized trees, depending on the year of harvest. The mesic, higher elevation strata naturally regenerate and grow more quickly than the drier strata. The Cabin Gulch area is productive and has successfully been reforested following disturbance.

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest. <u>19 acres</u> Total: 48 acres	Intermediate harvests are designed to enhance growth, quality, vigor, and composition of stands. Intact forest canopies were retained. Where regeneration harvest occurred, activities served to break up landscape homogeneity by adding patches of younger forest structure. This increased age class and species diversity by establishing young, shade intolerant stands. These sites are currently more resilient to the insect epidemic than older stands. These activities are a primary contributor to the age class, size class and species diversity. In the 1950's, the amount of harvest was very minimal. Regeneration harvests from this era are now pole-sized stands. Alternative 1 (no action) will not add to the mosaic of harvest on the landscape, and will not reduce potential impacts of insects and fire in or adjacent to past harvest areas. With the Action Alternatives, intermediate treatments will add to the mosaic of more open stand structures on the landscape. Treatments will further enhance growth, quality, and vigor within treated stands. These alternatives will also add to the mosaic of young stand structures through regeneration harvest. Combined with past treatments, these alternatives increase vigor and resilience at a greater scale. This occurs to the greatest extent with Alternatives 2 and 4, and to a lesser extent with Alternative 3.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		No appreciable effect to forested vegetation.
Forest Service Timber Harvest	1960-1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	In the 1960's, harvest was much more extensive than in the 1950's. Regeneration harvest dominated the treatment regime in this decade; areas from this era are generally pole-sized stands today. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169</u> <u>acres</u> Total: 253 acres	No wildfires occurred during this decade or the previous one due to successful fire suppression. Fuels activities did occur. Prescribed fire, slashing, and pile burning are used as tools to reduce fuels and in some cases reduce overstory tree density. These treatments have served to create more open conditions, lessen the hazards to high wildfire impacts, and to some extent increase resiliency of treated stands to insect mortality agents. These treatments occurred on very little acreage during the 1960's. These treated areas today likely have fewer fuels present and a more open forest condition, although some may have "grown back" to pre-treatment condition. Alternative 1 (no action) will not add to the mosaic of open conditions on the landscape, and will not reduce potential impacts fire in or adjacent to past fuel treatment. For the Action Alternatives, the creation of additional treated areas adds to the potential buffering effect on un-treated stands. Treatments will add to the heterogeneity and resiliency of stands, and to the amount of open forest conditions on the landscape. This will occur to the greatest extent with Alternatives 2 and 4 and to a lesser amount with Alternative 3.
Forest Service Timber Harvest	1970-1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97</u> <u>acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	In the 1970's, harvest was less extensive than in the 1960's. Regeneration harvest still dominated the treatment regime in this decade; areas from this era are generally sapling to pole-sized stands today. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	No wildfires occurred, and fuels treatment activities were extremely limited. See the discussion under Fire for the 1960's. There is little cumulative effect to proposed Alternatives.
Forest Service Timber Harvest	1980 -1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	In the 1980's, harvest was fairly extensive. Regeneration harvest still dominated the treatment regime in this decade; areas from this era are generally young sapling -sized stands today. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	Private land harvest occurred on a small acreage during this decade, and was intermediate in nature. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	No wildfires occurred, and fuels treatment activities were limited during this decade. See the discussion under Fire for the 1960's. There is little cumulative effect to proposed Alternatives.
Forest Service Timber Harvest	1990-1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	In the 1990's, harvest was fairly minimal. The dominant treatment regime shifted to intermediate harvest; areas from this era are generally more open but mature timber stands today. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	No wildfires occurred, and while fuels treatment activities began to increase during this decade the acreage affected was still minimal. See the discussion under Fire for the 1960's.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		No effect to the silviculture resource.
Mining		Hand-scale placer mining only		No appreciable effect to forested vegetation.
Forest Service Timber Harvest	2000 - present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005 included seasonal closures of roads in Sulphur Bar & Black Butte. Black Butte Salvage 2004: no new roads. *Note: Grassy Bugs Salvage '04 (200 ac) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries. 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: <u>1,252 acres</u></i>	The harvest that has occurred since 2000 within the cumulative effects boundary has been limited to salvage in response to fire mortality. None occurred in the project area. The result of this treatment in most areas was essentially a regeneration harvest, because new seedling stands were established. These stands are still in the seedling phase today. The discussion concerning past regeneration harvest, proposed alternatives and cumulative effects stated in the 1950's section applies.
Fire Maudlow-Toston, 2000, 81,691 acres total, not all in effects boundaries & Bear Gulch 2008, 683 acres total	2000-present	Cabin Project Area Wildfire Maudlow-Toston 250 acres Bear Gulch <u>617 acres</u> Total: 867 acres	By HUC's <i>Wildfire</i> 804 (Upper Deep Creek) Maudlow-Toston 8058 acres Bear Gulch 622 acres 802 (Middle Fk Deep Creek) Bear Gulch <u>61 acres</u> Total: 8,741 acres	These recent wildfires created a mosaic pattern on the landscape of age classes and species composition. Much of both fire areas burned with high intensity. These fires resulted in primarily early seral stands and some stands have not yet regenerated where the fire burned in forested areas. Much of the area burned was non-forested in nature. The fire in 2000 also increased Douglas-fir beetle populations. Ponderosa pine may have been promoted in areas that did not burn with high severity; however, some ponderosa pine was lost in the Bear Gulch fire. This fire resulted in primarily early seral stands and some stands have not yet regenerated. The fire also served to increase Douglas-fir beetle populations. Alternative 1 (no action) will not add to the mosaic of young or open stands on the landscape, and will not reduce potential impacts of insects and fire in or adjacent to past fire areas. With the Action Alternatives, intermediate treatments will add to the mosaic of more open stand structures on the landscape. Treatments will further enhance growth, quality, and vigor within treated stands. These alternatives will also add to the mosaic of young stand structures through regeneration harvest. Combined with past treatments, these alternatives increase vigor and resilience at a greater scale. This occurs to the greatest extent with Alternatives 2 and 4, and to a lesser extent with Alternative 3.
Bear Gulch Fire Suppression Activities	2008	Dozer Line: 5.5 miles of dozer line was constructed, including FS and private land (10 acres), average 15' wide. This consisted of road improvement on 3.1 miles of Bear Gulch road, and new construction of 2.4 miles on the S/SE edge of fire. 0.03 miles occurs in Unit 24f; 0.1		Some trees were removed to create the fire lines, but the amount was minimal in nature and the surrounding stands were not heavily affected. The cumulative impact with the Action Alternatives is to remove more trees from these

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
		miles in 24g; 0.3 miles in 24h; 0.2 miles in 24i, and 0.3 miles in 24j. Total acres affected by dozer line within treatment units is 1.85. Hand Line: 7.9 miles of handline was constructed, including FS and private land, average 1.5' wide. No hand line occurred within proposed units.	areas. There is no cumulative impact associated with the No Action Alternative.
Bear Gulch Rehabilitation	2008	Dozer Line: All dozer line was rehabilitated. Activities included scarification of running surfaces to a depth of at least 4"; sidecast material pulled & reshaped to natural ground contours; topsoil in berms spread across scarified/re-contoured surface; downed woody material placed on re-countoured surface, where available; re-seeded all exposed surfaces; water bars installed following standard specifications. Hand Line: All hand line was rehabilitated. Activities included pulling berms into hand line and line restored to blend with undisturbed soil contours; limbs and tops scattered across line; water bars installed according to standard spacing specifications.	Fire line rehabilitation aided in making the disturbed sites suitable for tree regeneration. No appreciable effect to forested vegetation with respect to any Alternative.
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding w/ grasses, erosion control.	No appreciable effect to forested vegetation.
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).	No appreciable effect to forested vegetation.
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.	MCH capsules are an effective tool to protect stands against DFB. On the landscape level this application has affected the Douglas-fir beetle very little as it occurs on small, high value areas (recreation sites). MCH efficacy only lasts 1 year, so the effects of this treatment are over. There is no cumulative effect with respect to any Alternatives.
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.	This insecticide treatment was localized and site specific, designed to improve cone production in 100 selected trees. This action had negligible impacts to the project area. With all alternatives, there is no cumulative affect in association with this past activity.
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.	

ON-GOING ACTIVITIES

Activity/Name	Decade/ Year	Scope of Activity		Resource Effects
Deep Creek Hazard Fuels	2004-present	Cabin Gulch Project Area (Hand thin & burn) Fuels Activities 87 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: <u>511 acres</u>	This project is designed to treat fuels in the wildland urban interface south of Cabin Gulch. By thinning to create more open stands, and underburning to reduce fuels, the project is creating an area more resilient to fire and less likely to promote severe fire conditions. This treatment area adds to the heterogeneity of the landscape in terms of stand density. It may also cause localized increases in Douglas-fir beetle populations. See the discussion under Past Activities, Fire, 1960's as the cumulative effects analysis applies here.
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.		No appreciable effect to forested vegetation.
Frank Flynn Mem. Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.		No appreciable effect to forested vegetation.
Grassy Mtn Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).		No appreciable effect to forested vegetation.
MT High Cntry Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.		No appreciable effect to forested vegetation.
Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)		Minimal effect to the Silviculture resource; potential impacts to seedlings and trees from grazing/trampling are analyzed and mitigated during analysis. There is no appreciable cumulative effect with respect to any Alternative.
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.		No appreciable effect to forested vegetation.
Noxious Weed Treatment	On-going	Herbicide treatment is along roads and in patches that are accessible to mechanized equipment, and backpack/horse pack equipment; some bio-control treatment (insects), grazing control (sheep), and mechanical.		Minimal effect to the Silviculture resource; potential impacts to trees near roads from spraying is analyzed and mitigated during analysis. There is no appreciable cumulative effect with respect to any Alternative.
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.		No appreciable effect to forested vegetation.
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.		No appreciable effect to forested vegetation.
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.		No appreciable effect to forested vegetation.
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.		No appreciable effect to forested vegetation.

Activity/Name	Decade/ Year	Scope of Activity		Resource Effects
Skidway Campground	On-going annual use maint.	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.		No appreciable effect to forested vegetation.
Sun Mtn Log Road Permit	2005 -2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.		No appreciable effect to forested vegetation.
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range w/ exception of designated routes to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.		No appreciable effect to forested vegetation.
South Belts Travel Management Plan	Implementation begin 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.		No appreciable effect to forested vegetation.
Halverson Road SUP	Spring 2008	Re-issuance of existing road access permit for long-term.		No appreciable effect to forested vegetation.
Private Land Timber Sale	2005 –2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Interm. harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>18 acres</u> Total: 5,021 acres	Fairly extensive harvest is ongoing on private ground in the cumulative effects boundary, both intermediate and regeneration harvest. Intermediate harvest areas are or will add to the mosaic of more open mature stands on the landscape. Regeneration harvest areas are or will be seedling-sized stands, adding to the mosaic of early seral forest on the landscape. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		No appreciable effect to forested vegetation.
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		May involve removal of forest cover to allow development. Little or no cumulative impact with any Alternative with respect to silviculture.

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	Reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements would include reconstructing approximately 2 miles of fence and 1 water development, constructing approximately 3 new water developments to improve riparian conditions and distribution of livestock.	Minimal effect to Silviculture; potential impacts to seedlings and trees from grazing/trampling are analyzed and mitigated during analysis. There is no appreciable cumulative effect with respect to any Alternative.
Deep/Grassy Allotment	Summer 2008	Reauthorize grazing on Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres in Deep Creek allotment. To improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also, grazing would be reauthorized on the Grassy Mountain allotment, 5,351 acres, and include approximately 2 miles of new fence and constructing approximately 5 new water dev. to improve riparian conditions and distribution of the livestock.	Minimal effect to the Silviculture resource; potential impacts to seedlings and trees from grazing/trampling are analyzed and mitigated during analysis. There is no appreciable cumulative effect with respect to any Alternative.
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures; each enclosing a segment of stream channel and surrounding wet meadows and springs. Willow cuts from Deep Creek will be planted within them. Proposal would allow riparian areas to move toward properly functioning condition & meet riparian grazing guidelines.	No appreciable effect to forested vegetation.
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	3 enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No appreciable effect to forested vegetation.
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	No appreciable effect to forested vegetation.

HABITATS OF SPECIAL CONCERN

PAST ACTIVITIES

Activity/Name	Decade	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	Intermediate harvests are designed to enhance growth, quality, vigor, and composition of stands. Intact forest canopies were retained. Where regeneration harvest occurred, activities served to break up landscape homogeneity by adding patches of younger forest structure. Past harvest would not have impacted whitebark pine directly as it is not cut for timber. Little or no logging occurred in high elevations where whitebark grows. Aspen also would not have been cut generally but may have benefited from harvest if competing conifers were

Activity/Name	Decade	Scope of Activity		Resource Effects
				<p>removed. Ponderosa pine would have been both been cut during harvest and benefited from open growing conditions afterwards if it was left behind. There would have been little to no impact on sagebrush and grasslands from past harvest. Insect and fire susceptibility would have been reduced in treated areas. Snags would have been reduced within units. The existing condition reflects the areas that were cut in this period. No pre-harvest data exist for these areas, but it is almost certain that old growth tree characteristics were removed for Douglas-fir and lodgepole.</p> <p>In the 1950's, the amount of harvest and impacts was minimal. With the Action Alternatives, intermediate treatments will add to the area of ponderosa pine and aspen benefited by open stand structures. Treatments will provide for whitebark pine regeneration. This occurs to the greatest extent with Alternatives 2 and 4, and to a lesser extent with Alternative 3. Alternative 1 will have no cumulative impact. Younger stands will be maintained in a more resilient condition to become old growth someday. Snags will be reduced in harvest areas but created in prescribed burn areas.</p>
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		No appreciable effect to the special habitats resource.
Forest Service Timber Harvest	1960 - 1969	<p>Cabin Project Area</p> <p>Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres</p>	<p>By HUC's</p> <p>802 (Middle Fork Deep Creek) Regen harvest: 617 acres</p> <p>803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres</p> <p>804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres</p>	<p>In the 1960's, harvest was much more extensive than in the 1950's. Regeneration harvest dominated the treatment regime in this decade; areas from this era are generally pole-sized stands today. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.</p>
Fire	1960-1969	<p>Cabin Project Area</p> <p>Fuels Activities: <u>84 acres</u> Total: 84 acres</p>	<p>By HUC's</p> <p>802 (Middle Fork Deep Creek) Fuels activities 25 acres</p> <p>803 (North Fork Deep Creek) Fuels activities 59 acres</p> <p>804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres</p>	<p>No wildfires occurred during this decade or the previous one due to suppression. Fuels activities did occur. Prescribed fire, slashing, and pile burning reduce fuels and in some cases reduce overstory tree density. These treatments have created more open conditions, lessened the hazards to high severity fire impacts, and to some extent increase resiliency of treated stands to insect mortality agents. These treatments occurred on very little acreage during the 1960's. These treated areas today likely have fewer fuels present and a more open forest condition, although some may have "grown back" to pre-treatment condition. Ponderosa pine, aspen,</p>

Activity/Name	Decade	Scope of Activity		Resource Effects
				<p>sagebrush, and grasslands would have been promoted by fuels treatments. Insect and fire susceptibility would have been reduced in treated areas and buffered adjacent old growth areas. Snags could have been reduced or increased within units depending on the treatment. Old growth characteristics may have been removed during these activities but would have been incidental (treatments of this sort are focused on removal of small material). Alternative 1 has no cumulative effect. For the Action Alternatives, the creation of additional treated areas adds to the promotion of ponderosa pine, aspen, sagebrush, and grasslands. Treatments will add to the heterogeneity and resiliency of stands. Snags will be created in areas of burning and reduced in areas of harvest. This will occur to the greatest extent in Alternatives 2/4 and to a lesser amount in Alt 3.</p>
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	<p>In the 1970's, harvest was less extensive than in the 1960's. Regeneration harvest still dominated the treatment regime; areas from this era are generally sapling to pole-sized stands today. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.</p>
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	<p>No wildfires occurred, and fuels treatment activities were extremely limited. See the discussion under Fire for the 1960's. There is little cumulative effect to proposed Alternatives.</p>
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	<p>In the 1980's, harvest was fairly extensive. Regeneration harvest still dominated the treatment regime in this decade; areas from this era are generally young sapling -sized stands today. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.</p>

Activity/Name	Decade	Scope of Activity		Resource Effects
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	Private land harvest occurred on a small acreage during this decade, and was intermediate in nature. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	No wildfires occurred, and fuels treatment activities were limited during this decade. See the discussion under Fire for the 1960's. There is little cumulative effect to proposed Alternatives.
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	In the 1990's, harvest was fairly minimal. The dominant treatment regime shifted to intermediate harvest; areas from this era are generally more open but mature timber stands today. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	No wildfires occurred, and while fuels treatment activities began to increase during this decade the acreage affected was still minimal. See the discussion under Fire for the 1960's.
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		No effect to the special habitats resource.
Mining		Hand-scale placer mining only		No effect to the special habitats resource.
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005 included seasonal closures of roads in Sulphur Bar & Black Butte. Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 ac) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: 1,252 acres	The harvest that has occurred since 2000 within the cumulative effects boundary has been limited to salvage in response to fire mortality. None occurred in the project area. The result of treatment in most areas was a regeneration harvest, because new seedling stands were established. These stands are still in the seeding phase today. The discussion concerning past regeneration harvest, proposed alternatives and cumulative effects stated in the 1950's section applies. Current old growth minimum tree characteristics were not adversely affected by this project because only dead and dying trees were harvested.

Activity/Name	Decade	Scope of Activity		Resource Effects
Fire <i>Maudlow-Toston, 2000, 81,691 acres total, not all in effects boundaries & Bear Gulch 2008, 683 acres total</i>	2000 to present	Cabin Project Area Wildfire Maudlow-Toston 250 acres Bear Gulch <u>617 acres</u> Total: 867 acres	By HUC's <i>Wildfire</i> 804 (Upper Deep Creek) Maudlow-Toston 8058 acres Bear Gulch 622 acres 802 (Middle Fk Deep Creek) Bear Gulch <u>61 acres</u> Total: 8,741 acres	These recent wildfires created a mosaic pattern on the landscape of age classes and species composition. Much of it burned with high intensity. These fires resulted in primarily early seral stands and some stands have not yet regenerated where the fire burned in forested areas. Much of the area burned was non-forested in nature. The fire in 2000 also increased Douglas-fir beetle populations. Aspen was enhanced, as were sagebrush and grasslands. Ponderosa pine may have been promoted in areas that did not burn with high severity. Old growth would have been eliminated where it occurred. The Bear Gulch fire did not burn any old growth. Old growth information was not collected prior to the Maudlow-Toston fire, but stand characteristics indicate that some areas likely had old growth minimum tree characteristics prior to the fire that is now dead. The fire created many snags. There is no cumulative impact with Alternative 1. With the Action Alternatives, treatment will further promote ponderosa pine, aspen, sagebrush, and grasslands. Snags could be reduced in harvest units but increased in burning units. Old growth will not be directly affected.
Bear Gulch Fire Suppression Activities	2008	Dozer Line: 5.5 miles of dozer line was constructed, including FS and private land (10 acres), average 15' wide. This consisted of road improvement on 3.1 miles of Bear Gulch road, and new construction of 2.4 miles on the S/SE edge of fire. 0.03 miles occurs in Unit 24f; 0.1 miles in 24g; 0.3 miles in 24h; 0.2 miles in 24i, and 0.3 miles in 24j. Total acres affected by dozer line within treatment units is 1.85. Hand Line: 7.9 miles of handline was constructed, including FS and private land, average 1.5' wide. No hand line occurred in proposed units.		No effect to the special habitats resource.
Bear Gulch Rehabilitation	2008	Dozer Line: All dozer line was rehabilitated. Activities included scarification of running surfaces to a depth of at least 4"; sidecast material pulled & reshaped to natural ground contours; topsoil in berms spread across scarified/re-contoured surface; downed woody material placed on re-countoured surface, where available; re-seeded all exposed surfaces; water bars installed following standard specifications. Hand Line: All hand line was rehabilitated. Activities included pulling berms into hand line and line restored to blend with undisturbed soil contours; limbs and tops scattered across line; water bars installed according to standard spacing specifications.		No effect to the special habitats resource.
Maudlow-Toston BAER Projects	2000-01	Various projects including post-fire seeding w/ grasses, erosion control.		No effect to the special habitats resource.

Activity/Name	Decade	Scope of Activity	Resource Effects
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).	No effect to the special habitats resource.
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.	No effect to the special habitats resource.
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.	No effect to the special habitats resource.
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.	No effect to the special habitats resource.

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Deep Creek Hazard Fuels	2004-present	<p>Cabin Gulch Project Area (Hand thin & burn)</p> <p>Fuels Activities 87 acres</p> <p>By HUC's</p> <p>801 (Russell Fork Deep Creek) Fuels activities 64 acres</p> <p>802 (Middle Fork Deep Creek) Fuels activities 1 acre</p> <p>804 (Upper Deep Creek) Fuels activities <u>446 acres</u></p> <p>Total: 511 acre</p>	This project is designed to treat fuels in the wildland urban interface south of Cabin Gulch. Thinning and underburning promote ponderosa pine, aspen, sagebrush, and grasslands are known to occur in this area. The project did not affect old growth and created snags through burn mortality. See the discussion under Past Activities, Fire, 1960's as the cumulative effects analysis applies here.
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.	No effect to the special habitats resource.
Frank Flynn Mem. Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	No effect to the special habitats resource.
Grassy Mtn Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	No effect to the special habitats resource.
MT High Cntry Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.	No effect to the special habitats resource.
Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	There are potential impacts to sagebrush and grasslands from grazing. Action Alternatives will promote sagebrush/grasslands in proposed treatment areas and may help offset grazing damage.
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	No effect to the Forested Vegetation resource.
Noxious Weed Treatment	On-going	Herbicide treatment is along roads and in patches that are accessible to mechanized equipment, and backpack/horse pack equipment; some bio-control treatment (insects), grazing control (sheep), and mechanical.	Noxious weed spraying generally promotes sagebrush/ grasslands by reducing non-native plant infestation. There is no appreciable effect to the other special habitats. There is no cumulative effect with Alternative 1. The Action Alternatives will further promote sagebrush and grasslands.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.		No effect to the special habitats resource.
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.		No effect to the special habitats resource.
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.		No effect to the special habitats resource.
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.		No effect to the special habitats resource.
Skidway Campground	On-going annual use maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.		No effect to the special habitats resource.
Sun Mtn Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.		No effect to the special habitats resource.
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range w/ exception of designated routes to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.		No effect to the special habitats resource.
South Belts Travel Management Plan	Implementation begin 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.		No effect to the special habitats resource.
Halverson Road SUP	Spring 2008	Re-issuance of existing road access permit for long-term.		No effect to the special habitats resource.
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Interm. harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>18 acres</u> Total: 5,021 acres	Fairly extensive harvest is ongoing on private ground in the cumulative effects boundary, both intermediate and regeneration harvest. Intermediate harvest areas are or will add to the mosaic of more open mature stands on the landscape. Regeneration harvest areas are or will be seedling-sized stands, adding to the mosaic of early seral forest on the landscape. The discussion concerning proposed alternatives and cumulative effects stated in the 1950's section applies.
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		No effect to the special habitats resource.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.	May involve removal of forest cover to allow development. Little or no cumulative impact with any Alternative with respect to special habitats.

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	Reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements would include reconstructing approximately 2 miles of fence and 1 water development, constructing approximately 3 new water developments to improve riparian conditions and distribution of livestock.	There are potential impacts to sagebrush and grasslands from grazing. Action Alternatives will promote sagebrush/grasslands in proposed treatment areas and may help offset grazing damage.
Deep/Grassy Allotment	Summer 2008	Reauthorize grazing on Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres in Deep Creek allotment. To improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also, grazing would be reauthorized on the Grassy Mountain allotment, 5,351 acres, and include approximately 2 miles of new fence and constructing approximately 5 new water developments to improve riparian conditions and distribution of the livestock.	There are potential impacts to sagebrush and grasslands from grazing. Action Alternatives will promote sagebrush/grasslands in proposed treatment areas and may help offset grazing damage.
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures; each enclosing a segment of stream channel and surrounding wet meadows and springs. Willow cuts from Deep Creek will be planted within them. Proposal would allow riparian areas to move toward properly functioning condition & meet riparian grazing guidelines.	Activity may serve to protect aspen from animal damage. Effect is minimal; no appreciable cumulative effects with any Alternative.
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	3 enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	Activity may serve to protect aspen from animal damage. Effect is minimal; no appreciable cumulative effects with any Alternative.
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	No effect to the special habitats resource.

WILDLIFE

Cumulative Effects

The cumulative effects analysis is based on a review of those projects/activities included in the following table. For each species/habitat, the past, present, and reasonably foreseeable future projects are evaluated for their potential affect on wildlife and their habitats. The following general description of past effects apply to all wildlife and their habitat and is presented here as “effects common to all”, so to speak.

Cumulative Effects and the Environmental Baseline

The environmental baseline for the wildlife and habitats analyzed in the Specialist Report is a result of the past activities that may have resulted in changes to those habitats. The projects in the following cumulative effects tables that resulted in the removal of habitat are reflected in the existing description and models of habitats. Specifically, if vegetation management has occurred in the past, then those changes on the landscape as a result of management are captured in our queries that model a specific wildlife habitat.

Cumulative Effects Analysis Area

The cumulative effects areas are species specific and include:

- Elk analysis areas and herd units
- Elk winter range
- Lynx analysis unit bb_05
- Wolverine natal denning habitat Big Belts
- Cabin Gulch project area
- South Belts
- Partial Big Belts

Synopsis of Cumulative Effects Relevant to Wildlife

Summary of Past Effects

Humans have had an influence on wildlife and their habitat prior to the arrival of the first eastern explorers and settlers. Local Native Americans influenced wildlife through hunting and trapping, setting fires, establishing seasonal encampments, and grazing horses, as well as a variety of other activities. Aside from setting fires, most of these activities were localized or of low intensity such that widespread impacts on wildlife and their habitats were not present. With the arrival of Euro-Americans, major changes occurred to wildlife and their habitats. Beaver were nearly extirpated, riparian areas were dwindling, and mining, particularly on the Helena National Forest, exerted major landscape influences. Primary influences on wildlife and their habitats include:

- Road building and maintenance some of which has modified streams, reduced terrestrial habitat, and reduced habitat effectiveness by facilitating human access
- Domestic livestock grazing on public and private lands
- Timber harvest
- Fire suppression that has resulted in shifts in stand structure and composition
- Trapping and hunting which has reduced populations of several species in the North Belts (e.g. wolves, grizzly bears)

- Widespread recreation including dispersed and developed recreation that result in varying degrees of disturbance to wildlife and their habitats
- Dispersed settlement on Forest inholdings
- Wildfire

Summary of Recent and Ongoing Effects

Ongoing activities within or near the Cabin Gulch project area that continue to influence wildlife include the following:

- Maudlow –Toston Fire and Salvage Sale
- Bear Gulch Fire
- Tree planting in Cave Gulch and Mauldow Toston Fire areas
- Outfitter Guide Permit Re-issuances
- Black Butte Salvage Sale
- Grassy Bugs Salvage Sale
- Greyson Bugs Salvage Sale
- Deep Creek Hazardous Fuels
- Road Maintenance
- Mining
- Baldy & North Fork Allotments AMP Implementation
- Timber Harvest on Private Land
- South Belts Travel Plan Implementation

Summary of Reasonably Foreseeable Activities

- Helena National Forest Weed Treatments
- Ray Creek AMP NEPA and Implementation
- Fuel Reduction on Private Land

Implications of Action Alternatives for Cumulative Effects

This section discusses how impacts expected from the three Cabin Gulch action alternatives would add to the cumulative effects summarized above.

In the table that follows, contributions of the 3 different action alternatives to cumulative effects have been combined. The rationale for this approach (as opposed to examining each alternative separately) is that, given the magnitude of past, present, and future effects throughout the expanded analysis area, the differences between action Alternatives 2, 3, and 4 are all but imperceptible in terms of how they contribute to cumulative effects.

The “No Action” Alternative is sufficiently different in terms and vegetative management that its relation to cumulative effects is examined separately.

Action Alternatives - Cumulative Effects on Wildlife Historic Activities

Historic Activities	General Effects	Contribution of Action Alternatives to Cumulative Effects
Historic Timber Harvest	Logging in the 19 th & early 20 th centuries removed most large trees from several thousand acres, primarily at low-middle elevation. Today, most of these sites are occupied by 100-125 year-old conifer stands, relatively dense.	All action alternatives would convert several hundred acres of these dense mature conifer stands to open-grown mature stands or back to the early-seral habitats generated by historic logging.
Past Road Construction	Roads built for early mining, settlement, and access to resources have provided the foundation for an extensive road network today. Some are abandoned, but many remain—facilitating widespread motorized access to public & private lands.	Alternatives 2 and 3 would offset the closure of the West Fork Cabin Gulch road by a new road to the north. Alternative 4 would continue the existing road network.
Historic Livestock Grazing	Until mid 20 th century, most ranges were overstocked with cattle & sheep, creating severe competition for native grazers. Biomass & vegetative diversity in grass/forb communities declined. In recent decades lower stocking & deferred rest have reversed these trends on many sites.	All action alternatives would increase availability of grass/forb/shrub habitats by opening up forest understories & removing encroaching conifers from rangeland. This should contribute to spreading out grazing pressure from all sources (wild and domestic).
Fire Suppression	Effective fire prevention & suppression (esp. since the 1930s) has allowed mature forest to expand & forest structure to become more complex. Open habitats have declined as conifers encroach. Risk of intense stand-replacing fire is amplified.	All action alternatives would contribute to reversing negative effects of fire suppression by reducing ladder fuels & stand densities at several sites. This should improve sustainability of local forest habitats & contribute to long-term stability of certain wildlife habitats.
Extirpation and Recovery of Game Animals and Furbearers	By early 20 th century, populations of most game animals, furbearers, & predators were decimated by subsistence hunting & trapping. Today, most have returned through reintroduction or natural recovery. Species still at sub-optimal levels include: grizzly bear, wolf, wolverine, lynx, fisher, marten, beaver, & bighorn sheep.	Action alternatives would improve habitat effectiveness & security for big game animals by reducing open route density. They would not add measurably to cumulative actions depressing populations of wolves, wolverine, fisher, marten, beaver, & bighorn sheep—and may reduce mortality risk through travel management. They are unlikely to add to cumulative effects influencing lynx & grizzly.
Historic Mining Operations	Past mining has altered local topography & stream-flow and generated erosion.	Action alternatives would not add cumulatively to the effects of past mining with regard to wildlife.
Local Settlement, Road Construction and Other Human Activities	In late 19 th & early 20 th centuries, human activity associated with mining & general settlement was widespread. Current human presence: heavy settlement in the Townsend area, rural settlement in the wildland/ urban interface, & increasing dispersed recreation.	All action alternatives would mitigate some of the cumulative influence of human presence by moving the project area towards sustainable conditions.

Action Alternatives - Cumulative Effects on Wildlife Recent and On-going Activities

Recent and Ongoing Activities	General Effects	Contribution of Action Alternatives to Cumulative Effects
Northern Rockies Lynx Management Direction (NRLMD)	The NRLMD considers the Big Belts unoccupied habitat with respect to lynx.	The NRLMD applies only to occupied habitat; however, standards and guidelines are analyzed with respect to lynx habitat mapped and managed under the Lynx Conservation and Assessment Strategy.

Recent and Ongoing Activities	General Effects	Contribution of Action Alternatives to Cumulative Effects
Baldy Allotment AMP Revision Implementation	AMP revision adjusts grazing levels, livestock distribution, and grazing seasons; increases riparian protection, sets standards for maintaining healthy vegetative conditions over the long term.	All action alternatives would increase the availability of grass/forb/shrub habitats by opening up forest understories and removing encroaching conifers from rangeland.
Maudlow Toston Salvage Sale	Habitat for woodpeckers (black-backed, three-toed, and hairy woodpeckers), created by the wildfire, was removed as part of the salvage sale. However, these habitats are short-lived, generally lasting up to 6 years post-fire coinciding with the emigration of insects out of the area.	All action alternatives will add to cumulative effects through removal of habitat for woodpecker species by removing insect infested trees as well as reducing susceptibility to insects in the long term. However, other portions of the project area will continue to experience insect infestations thereby providing woodpecker habitat.
Bear Gulch Fire	Habitat for woodpeckers (black-backed, three-toed, and hairy woodpeckers) has been created by the wildfire and will provide nesting and foraging habitat for at least the next several years.	All action alternatives will add to cumulative effects through removal of habitat for woodpecker species by removing insect infested trees as well as reducing susceptibility to insects in the long term. However, other portions of the project area will continue to experience insect infestations thereby providing woodpecker habitat.
Tree Planting in Cave Gulch and Maudlow Toston Fire Areas	Tree planting in these salvage areas will accelerate tree growth thereby restoring forested habitats more quickly than if left unplanted. Wildlife species associated with forested habitats (e.g. goshawks, pileated woodpeckers, marten) should benefit in the long term.	All action alternatives will contribute to accelerated tree growth in those forested stands where treatments are proposed.
Rams horn Outfitter Guide Permit Reissuance	Outfitter guide permit will result in reductions of big game species.	All action alternatives will affect big game (e.g. elk) species by removing hiding cover. Alternative 2 and 3 will improve elk security by closing the West Fork of Cabin Gulch Road.
Black Butte Salvage Sale	Potential woodpecker habitat was removed from the project area although the effectiveness of the Black Butte project area as woodpecker habitat has been diminishing as insect levels decline.	All action alternatives will add to cumulative effects through removal of habitat for woodpecker species by removing insect infested trees as well as reducing susceptibility to insects in the long term. However, other portions of the project area will continue to experience insect infestations thereby providing woodpecker habitat.
Grassy Bugs Salvage Sale	Flammulated owl habitat nesting habitat was affected by the project through the removal of dense patches of habitat adjacent to riparian or remaining large trees. The removal of dead and dying trees associated with insect activity reduced foraging habitat for black-backed, hairy, and pileated woodpeckers.	All action alternatives should improve tree growth in dry forested areas well as open up the understory potentially improving flammulated owl habitat. Large trees preferred by pileated woodpeckers as nesting habitat should also be promoted within the project area. All action alternatives should remove black-backed and hairy woodpecker habitat through the removal of dead and dying trees created through insect infestations. However, portions of the project area will remain untreated and continue to provide foraging habitat for these species.
Deep Creek Hazardous Fuels	This removes dead and dying trees thereby reducing foraging opportunities for pileated, black-backed, and hairy woodpeckers. However, prescribed fire should result in additional tree mortality and subsequent foraging opportunities for these species.	All action alternatives will reduce the potential for foraging habitat for pileated, black-backed, and hairy woodpeckers. However, portions of the project area will remain untreated and continue to provide foraging habitat. Also, as many large snags as possible will be retained.

Recent and Ongoing Activities	General Effects	Contribution of Action Alternatives to Cumulative Effects
Greyson Bugs	<p>Flammulated owl potential habitat is enhanced by promoting large trees used as nesting habitat as well as creating an open understory conducive to foraging.</p> <p>Nesting and foraging habitat for pileated, black-backed, and hairy woodpeckers would be reduced.</p>	<p>All action alternatives will promote large tree distribution in the project area potentially improving flammulated and pileated woodpecker nesting habitat. As many large snags as possible would be retained.</p> <p>All action alternatives will remove nesting and foraging habitat for black-backed and hairy woodpeckers. However, portions of the project area will remain untreated and continue to provide nesting and foraging habitat.</p>
Road Maintenance	<p>Primary Forest system roads are bladed or otherwise maintained from spring through fall. Some are plowed in winter (mostly primary County roads or for access to private holdings).</p>	<p>The closure of the West Fork of Cabin Gulch road in Alternatives 2 and 3 will reduce disturbance and mortality risks to wildlife as well as improve security habitat for all species in that area. The new road proposal associated with these alternatives to offset the effects of the road closure will create displacement and disturbance to wildlife in that portion of the project area. Alternative 4 will maintain the existing road system.</p>
Mining	<p>Small scale, personal use mining may temporarily displace and disturb wildlife.</p>	<p>All action alternatives would not add cumulatively to the effects of ongoing mining with regard to wildlife.</p>

Action Alternatives - Cumulative Effects on Wildlife Foreseeable Future Activities

Foreseeable Future Activities	General Effects	Contribution of Action Alternatives to Cumulative Effects
Noxious Weed Treatments	<p>Treatments will be expanded on both public and private lands throughout the area. Herbicide spraying will remain the primary treatment but biological agents and other controls will be applied. Improvement in diversity and vigor of native grass-forb habitats expected.</p>	<p>Weed treatments included in all action alternatives would add to the overall effectiveness of ongoing weed control programs in the area.</p>
Fuel Reduction on Private Land	<p>Thinning and other fuel reduction projects on private lands near the project area will reduce habitat for various species depending on the existing conditions. Vegetative structure varies widely from mature forest to grassland with colonizing conifers.</p>	<p>All action alternatives would add to this effect with thinning and prescribed burning in a variety of forest, grassland, and shrubland habitats. In general, changes favor wildlife species adapted to open forest, grassland, and ecotone habitats.</p>

Contribution of No Action Alternative to Cumulative Effects

This section discusses how impacts expected from the No Action Alternative would contribute to the cumulative effects.

No Action Alternative: Cumulative Effects on Wildlife Historic Activities

Historic Activities	General Effects	Contribution of the No Action Alternative to Cumulative Effects
Historic Timber Harvest	Logging in the 19 th & early 20 th centuries removed most large trees from several thousand acres, primarily at low-middle elevation. Today, most of these sites are occupied by 100-125 year-old conifer stands, relatively dense & generally healthy.	The No Action Alternative would allow mature stands created by historic timber harvest to remain in current condition in the short term and to slowly mature further. This would retain habitat for interior forest wildlife, while allowing habitat for open-forest species to decline further.
Past Road Construction	Roads built for early mining, settlement, and access to resources have provided the foundation for an extensive road network today. Some are abandoned, but many remain—facilitating motorized access to public & private lands.	The No Action Alternative would retain all current open roads and would allow trends toward pioneering of new routes to continue.
Historic Livestock Grazing	Until mid 20 th century, most ranges were overstocked with cattle & sheep, creating severe competition for native grazers. Biomass & vegetative diversity in grass/forb communities declined. In recent decades lower stocking & deferred rest have reversed these trends on many sites.	The No Action Alternative would allow the ongoing loss of grassland habitat to conifer encroachment to continue. Over the long term this would contribute to increasing grazing pressure on remaining ranges.
Fire Suppression	Effective fire suppression (esp. since the 1930s) has allowed mature forest stands to expand & become more complex. Open habitats have declined as Regenerating conifers are encroaching on open grass/forb habitats, amplifying the risk of intense stand-replacing fire.	The No Action Alternative would contribute to increasing risk of stand replacement fire by retaining dense forest stands throughout the area and allowing the continued development of ladder fuels.
Extirpation and Recovery of Game Animals and Furbearers	By early 20 th century, populations of most game animals, furbearers, & predators were decimated by subsistence hunting & trapping. Today, most have returned through reintroduction or natural recovery. Species still at sub-optimal levels include: grizzly bear, wolf, wolverine, lynx, fisher, marten, beaver, & bighorn sheep.	The No Action Alternative would allow forested cover to improve but would allow security and undisturbed space for big game and other species wary of human activity to decline through continued pioneering of new motorized access routes. Winter range opportunities would slowly decline as colonizing conifers continued to usurp forage.
Historic Mining Operations	Past mining has altered local topography & stream-flow and generated erosion.	The No Action Alternative would not add cumulatively to the effects of past mining with regard to wildlife.
Local Settlement, Road Construction and Other Human Activities	In late 19 th & early 20 th centuries, human activity associated with mining & general settlement was widespread. Current human presence: heavy settlement in the Helena Valley, rural settlement in the wildland/ urban interface, & increasing dispersed recreation.	The No Action Alternative would allow current trends in expanded motorized recreation to continue. It would have no effect on the pattern of rural settlement.

No Action Alternative: Cumulative Effects on Wildlife Recent and On-going Activities

Recent and Ongoing Activities	General Effects	Contribution of No Action Alternative to Cumulative Effects
Northern Rockies Lynx Management Direction (NRLMD)	The NRLMD considers the Big Belts unoccupied habitat with respect to lynx.	The NRLMD applies only to occupied habitat; however, standards and guidelines are analyzed with respect to lynx habitat mapped and managed under the Lynx Conservation and Assessment Strategy.
Baldy Allotment AMP Revision Implementation	AMP revision adjusts grazing levels, livestock distribution, and grazing seasons; increases riparian protection, sets standards for maintaining healthy vegetative conditions over the long term.	The No Action Alternative would allow conifer colonization of grass/forb/shrub habitats to continue, reducing foraging opportunities for both domestic and native grazers.
Maudlow Toston Salvage Sale	Habitat for woodpeckers (black-backed, three-toed, and hairy woodpeckers), created by the wildfire, was removed as part of the salvage sale. However, these habitats are short-lived, generally lasting up to 6 years post-fire coinciding with the emigration of insects out of the area.	The No Action Alternative would not add to the reduction of woodpecker habitat.
Tree Planting in Cave Gulch and Maudlow Toston Fire Areas	Tree planting in these salvage areas will accelerate tree growth thereby restoring forested habitats more quickly than if left unplanted. Wildlife species associated with forested habitats (e.g. goshawks, pileated woodpeckers, marten) should benefit in the long term.	The No Action Alternative would not add to the tree growth in forested portions of the project area.
Bear Gulch Fire	Habitat for woodpeckers (black-backed, three-toed, and hairy woodpeckers) has been created by the wildfire and will provide nesting and foraging habitat for at least the next several years.	The project area will continue to experience insect infestations thereby providing woodpecker habitat.
Rams horn Outfitter Guide Permit Reissuance	Outfitter guide permits will result in reductions of big game species.	The No Action Alternative would not affect big game habitat.
Black Butte Salvage Sale	Potential woodpecker habitat was removed from the project area although the effectiveness of the Black Butte project area as woodpecker habitat has been diminishing as insect levels decline.	The No Action Alternative would not add to the reduction of woodpecker habitat.
Grassy Bugs Salvage Sale	Flammulated owl habitat nesting habitat was affected by the project through the removal of dense patches of habitat adjacent to riparian or remaining large trees. The removal of dead and dying trees associated with insect activity reduced foraging habitat for black-backed, hairy, and pileated woodpeckers.	The No Action Alternative would not add to the open-forest habitats created by the Grassy Bugs Salvage Sale. The No Action Alternative would not reduce foraging habitat for black-backed, pileated, and hairy woodpeckers.
Deep Creek Hazardous Fuels	Deep Creek hazardous fuels removes dead and dying trees thereby reducing foraging opportunities for pileated, black-backed, and hairy woodpeckers. However, prescribed fire should result in additional tree mortality and subsequent foraging opportunities for these species.	The No Action Alternative would not reduce habitat for pileated, black-backed, and hairy woodpeckers. Furthermore, the No Action Alternative would not add to open forest habitats generally utilized by flammulated owls.
Greyson Bugs	Flammulated owl potential habitat is enhanced by promoting large trees used as nesting habitat as well as creating an open understory conducive to foraging. Nesting and foraging habitat for pileated, black-backed, and hairy woodpeckers would be reduced.	The No Action Alternative would not add to the open-forest habitats created by Greyson Bugs. The No Action Alternative would not reduce nesting and foraging habitat for pileated, black-backed, and hairy woodpeckers.

Recent and Ongoing Activities	General Effects	Contribution of No Action Alternative to Cumulative Effects
Road Maintenance	Primary Forest system roads are bladed or otherwise maintained from spring through fall. Some are plowed in winter (mostly primary County roads or for access to private holdings).	The No Action Alternative would retain current road densities and maintenance patterns. In the short term, wildlife disturbance and mortality risk associated with open roads would remain at current levels.
Mining	Small scale, personal use mining may temporarily displace and disturb wildlife.	The No Action Alternative would not add cumulatively to the effects of ongoing mining.

No Action Alternative: Cumulative Effects on Wildlife Foreseeable Future Activities

Foreseeable Future Activities	General Effects	Contribution of Action Alternatives to Cumulative Effects
Noxious Weed Treatments	Treatments will be expanded on both public and private lands throughout the area. Herbicide spraying will remain the primary treatment but biological agents and other controls will be applied. Improvement in diversity and vigor of native grass-forb habitats expected.	The No Action Alternative would not create new conditions conducive to new noxious weed invasion and would have no effect on ongoing weed treatment programs.
Fuel Reduction on Private Land	Thinning and other fuel reduction projects on private lands near the project area will reduce habitat for various species depending on the existing conditions. Vegetative structure varies widely from mature forest to grassland with colonizing conifers.	The No Action Alternative would retain current patterns of cover, forage, vegetative structure and fuel accumulations on the National Forest.

AIR QUALITY

All activities considered and addressed in the specialist's report.

SENSITIVE PLANTS

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	It is possible that there were sensitive plants that were impacted by these activities. No sensitive plants have been found in these areas to date.
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		This was a small scale activity that likely had a minor if any impact on sensitive plants.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	1960 - 1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	It is possible that there were sensitive plants that were impacted by these activities. No sensitive plants have been found in these areas to date.
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	The sensitive plants that are of concern to the HNF all evolved with fire. It is possible that severe fires impacted some plants. Most fire effects would have been minor.
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	It is possible that there were sensitive plants that were impacted by these activities. No sensitive plants have been found in these areas to date.
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	The sensitive plants that are of concern to the HNF all evolved with fire. It is possible that severe fires impacted some plants. Most fire effects would have been minor.
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres	It is possible that there were sensitive plants that were impacted by these activities. No sensitive plants have been found in these areas to date.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
			Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	It is possible that there were sensitive plants that were impacted by these activities.
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	The sensitive plants that are of concern to the HNF all evolved with fire. It is possible that severe fires impacted some plants. Most fire effects would have been minor. No sensitive plants have been found in these areas to date.
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	It is possible that there were sensitive plants that were impacted by these activities. No sensitive plants have been found in these areas to date.
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	The sensitive plants that are of concern to the HNF all evolved with fire. It is possible that severe fires impacted some plants. Most fire effects would have been minor. No sensitive plants have been found in these areas to date.
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		It is possible that there were sensitive plants that were impacted by these activities.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Mining		Hand-scale placer mining only		This was a small scale activity that likely had a minor if any impact on sensitive plants.
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005</i> <i>included seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 acres) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: <u>1,252 acres</u>	It is possible that there were sensitive plants that were impacted by these activities. No sensitive plants have been found in these areas to date.
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: <u>8,058 acres</u>	The sensitive plants that are of concern to the HNF all evolved with fire. It is possible that severe fires impacted some plants. Most fire effects would have been minor. No sensitive plants have been found in these areas to date.
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		Plant surveys did not reveal plant populations in these areas.
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		Plant surveys did not reveal plant populations in these areas.
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.		This activity does not have any impact on sensitive plant populations.
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.		This activity does not have any impact on sensitive plant populations.
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.		No sensitive plants have been found in this area to date.

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Deep Creek Hazard Fuels	2004-present	Cabin Gulch Project Area (Hand thin & burn) Fuels Activities 87 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: <u>511 acres</u>	No sensitive plants were found in this area during past surveys.
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.		No sensitive plants were found in this area during past surveys.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	No sensitive plants were found in this area during past surveys.
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	This activity does not impact sensitive plant populations.
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.	This activity does not impact sensitive plant populations.
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	No sensitive plant populations have been found to date in the livestock grazing areas.
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	No sensitive plants were found in these areas during past surveys.
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	It is possible that noxious weed treatment could impact sensitive plant populations. Mitigations are applied to minimize the conflict.
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	This activity does not impact sensitive plant populations.
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.	This activity does not impact sensitive plant populations.
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.	This activity does not impact sensitive plant populations.
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.	This activity does not impact sensitive plant populations.
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.	There are no known plant populations in this area.
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.	This activity does not impact sensitive plant populations.
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.	A sensitive plant BE was completed on this project that concluded unlikely impacts would cause listing.
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.	A sensitive plant BE was completed on this project that concluded unlikely impacts would cause listing.
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.	This activity does not impact sensitive plant populations.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres	It is possible that sensitive plant populations could be impacted by this activity.
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		It is possible that sensitive plant populations could be impacted by this activity.
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		It is possible that sensitive plant populations could be impacted by this activity.

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock.	No sensitive plants have been found in this area to date.
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	No sensitive plants have been found in this area to date.
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	This activity would not negatively impact sensitive plant populations.

Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	This activity would not negatively impact sensitive plant populations.
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	This activity would not negatively impact sensitive plant populations.

SOILS

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	Possible soil productivity cumulative effects where proposed vegetation treatments overlap spatially with areas of past harvest: in proposed treatment units 2, 10, 11, 12, 70 and 79. Mitigation recommended to minimize soil productivity cumulative effects in these 6 proposed treatment units.
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Forest Service Timber Harvest	1960 - 1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	Possible soil productivity cumulative effects where proposed vegetation treatments overlap spatially with areas of past harvest: in proposed treatment units 2, 10, 11, 12, 70 and 79. Mitigation recommended to minimize soil productivity cumulative effects in these 6 proposed treatment units.
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	Possible soil productivity cumulative effects where proposed vegetation treatments overlap spatially with areas of past harvest: in proposed treatment units 2, 10, 11, 12, 70 and 79. Mitigation recommended to minimize soil productivity cumulative effects in these 6 proposed treatment units.
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	Possible soil productivity cumulative effects where proposed vegetation treatments overlap spatially with areas of past harvest: in proposed treatment units 2, 10, 11, 12, 70 and 79. Mitigation recommended to minimize soil productivity cumulative effects in these 6 proposed treatment units.
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	Possible soil productivity cumulative effects where proposed vegetation treatments overlap spatially with areas of past harvest: in proposed treatment units 2, 10, 11, 12, 70 and 79. Mitigation recommended to minimize soil productivity cumulative effects in these 6 proposed treatment units.
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: <u>156 acres</u>	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Mining		Hand-scale placer mining only		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005 included seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 acres) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: <u>1,252 acres</u>	Possible soil productivity cumulative effects where proposed vegetation treatments overlap spatially with areas of past harvest: in proposed treatment units 2, 10, 11, 12, 70 and 79. Mitigation recommended to minimize soil productivity cumulative effects in these 6 proposed treatment units.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: 8,058 acres	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.		No soil productivity cumulative effects because activity does not have impact on soil resources.
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.		No soil productivity cumulative effects because activity does not have impact on soil resources.
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Deep Creek Hazard Fuels	2004-present	Cabin Gulch Project Area (Hand thin & burn) Fuels Activities 87 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: 511 acres	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	No soil productivity cumulative effects because activity does not have impact on soil resources.
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	No soil productivity cumulative effects because activity does not have impact on soil resources.
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	Possible soil cumulative effects from grazing in proposed treatment units following implementation of vegetation treatments. Potential soil cumulative effects could occur where proposed vegetation treatments overlap spatially with grazing in portions of the Ray Creek, North Fork Deep Creek and Bear Cabin Allotments. Mitigation recommended to minimize soil cumulative effects of grazing in proposed treatment units following implementation of vegetation treatments within these allotments.
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	Potential for cumulative effects to soil productivity from noxious weed invasion in areas disturbed by proposed vegetation management activities. The extent and likelihood of noxious weed invasions in areas affected by proposed vegetation management activities is analyzed and disclosed in the Noxious Weeds Report for this project. The Noxious Weeds Report also specifies mitigation measures to minimize effects of noxious weeds: following implementation of proposed vegetation treatments (including road construction and road decommissioning), sites would be monitored for noxious weed invasion, and subsequent weed treatments would be conducted to control and eradicate weeds. With this mitigation, soil cumulative effects from noxious weeds would be minimized.
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Bellts.	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.	No soil productivity cumulative effects because lands affected by administrative sites as well as permanent roads and trails are not managed for productivity, rather

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
				affected lands are managed for other administrative and transportation uses. Thus, soil management standards are not applied to these affected lands.
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.		No soil productivity cumulative effects because lands affected by administrative sites as well as permanent roads and trails are not managed for productivity, rather affected lands are managed for other administrative and transportation uses. Thus, soil management standards are not applied to these affected lands.
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.		No soil productivity cumulative effects because lands affected by administrative sites as well as permanent roads and trails are not managed for productivity, rather affected lands are managed for other administrative and transportation uses. Thus, soil management standards are not applied to these affected lands.
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.		No soil productivity cumulative effects because lands affected by administrative sites as well as permanent roads and trails are not managed for productivity, rather affected lands are managed for other administrative and transportation uses. Thus, soil management standards are not applied to these affected lands.
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.		No soil productivity cumulative effects because lands affected by administrative sites as well as permanent roads and trails are not managed for productivity, rather affected lands are managed for other administrative and transportation uses. Thus, soil management standards are not applied to these affected lands.
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.		No soil productivity cumulative effects because lands affected by administrative sites as well as permanent roads and trails are not managed for productivity, rather affected lands are managed for other administrative and transportation uses. Thus, soil management standards are not applied to these affected lands.
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.		No soil productivity cumulative effects because lands affected by administrative sites as well as permanent roads and trails are not managed for productivity, rather affected lands are managed for other administrative and transportation uses. Thus, soil management standards are not applied to these affected lands.
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627</u>	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
		<u>acres</u> Total: 676 acres	802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres	
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock.	Possible soil cumulative effects from grazing in proposed treatment units following implementation of vegetation treatments. Potential soil cumulative effects could occur where proposed vegetation treatments overlap spatially with grazing in portions of the Ray Creek, North Fork Deep Creek and Bear Cabin Allotments. Mitigation recommended to minimize soil cumulative effects of grazing in proposed treatment units following implementation of vegetation treatments within these allotments.
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	No soil productivity cumulative effects because area of activity impact does not overlap spatially with areas of proposed vegetation treatments.

HYDROLOGY

All activities considered and addressed in specialist's report

FISHERIES

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	Stands have revegetated and do not produce persistent sediment. Access roads to units have been accounted for in Roads Analysis for Helena National Forest and in 2005 road sediment surveys. Stream core data targets cumulative sediment from past and ongoing human disturbance and natural processes.
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		No sediment effects. Activity accounted for under 2005 pollutant source surveys conducted by hydrology field crews (see project file).
Forest Service Timber Harvest	1960 - 1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	Stands have revegetated and do not produce persistent sediment. Access roads to units have been accounted for in Roads Analysis for Helena NF and 2005 road sediment surveys. Stream core data targets cumulative sediment from past and ongoing human disturbance and naturally produced sediment.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	Burn units have revegetated and do not produce persistent sediment.
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	Stands have revegetated and do not produce persistent sediment. Access roads have been accounted for in Roads Analysis and 2005 road sediment surveys. Stream core data targets cumulative sediment from past and ongoing human disturbance and natural background sediment.
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	Burn units have revegetated and do not produce persistent sediment.
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	Stands have revegetated and do not produce persistent sediment. Access roads have been accounted for in Roads Analysis and 2005 road sediment surveys. Stream core data targets cumulative sediment from past and ongoing human disturbance and naturally produced sediment.
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	Same as effects under Forest Service timber harvest for 1980-1989.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	Burn units have revegetated and do not produce persistent sediment.
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	Stands have revegetated and do not produce persistent sediment. Access roads have been accounted for in Roads Analysis and 2005 road sediment surveys. Stream core data targets cumulative sediment from past and ongoing human disturbance and naturally produced sediment.
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	Majority acres outside of cumulative effects boundary for Cabin Gulch project area. Burn units have revegetated and do not produce persistent sediment.
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		Project below cumulative effects area for Cabin Gulch treatment area. Project provides an improvement cumulatively to Deep Creek fishery below cumulative effects area on private lands.
Mining		Hand-scale placer mining only		Accounted for in core sampling the critical reaches of fishbearing streams in project area. Refer to 2005 pollutant source surveys conducted by hydrology field crews (see project file).
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005 included seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 acres) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: 1,252 acres	Maudlow-Toston and Black Butte Salvage projects accounted for by core sampling critical reach (Deep Cr) for cumulative effects. Minimal short term sediment effects to Deep Creek due to BMPs and special mitigations. Grassy Bugs and Greyson Bugs salvage projects outside of fisheries cumulative effects areas; therefore, dropped from further consideration.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: 8,058 acres	Wildfire is not a federal action. However, sedimentation is accounted for by core sampling the critical reach in Deep Creek below the project area.
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		Sedimentation to Deep Creek accounted for by core sampling critical reach for cumulative effects. These projects intended to mitigate fire effects by reducing erosion and sedimentation.
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		These actions intended to accelerate watershed recovery by reducing erosion/sedimentation. Sediment accruing to Deep Creek accounted for by core sampling critical reach for cumulative effects.
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.		This project has no impact on fish or fish habitat, and therefore is not considered further for cumulative impacts to Deep Cr fisheries.
Insecticide apply	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.		This treatment has no measurable effect on fisheries habitat.
Skidway Cross Country Ski Trail	2003	Constructed approximately 3 miles of trail for x-country skiing.		Project not contributing sediment to Deep Cr under initial project review. Any sediment accruing to Deep Creek trout accounted for by core sampling critical reach for cumulative effects.

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Deep Creek Hazard Fuels	2004-present	Cabin Gulch Project Area (Hand thin & burn) Fuels Activities 87 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: 511 acres	Sediment accruing to Deep Creek accounted for by core sampling critical reach for cumulative effects. These activities have little or no sediment risk on Deep Creek due to general lack of surface soil exposure.
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.		No measurable sediment effect from reopening Deep Cr picnic area.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	Not in fisheries cumulative effects area, therefore dropped from further consideration.
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	Project analyzed under Forest's small NEPA framework and determined to have no effect on fisheries.
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek area. June – August. Three drives per season.	Not in fisheries cumulative effects area, therefore dropped from further consideration.
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	Sediment accruing to Deep Creek and project area streams accounted for by core sampling critical reach for cumulative effects. Refer to 2005 pollutant source surveys conducted by hydrology field crews (see project file).
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	These activities are part of cumulative sediment effects considered by core sampling critical reaches of fishbearing streams. These activities are generally diverted outside the stream and near bank areas to eliminate sediment risk to fisheries. Those requiring permits are reviewed by fisheries for recommended actions to mitigate against long-term sediment and stream impacts.
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	No measurable sediment effects to fisheries.
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	Primary use area not in fisheries cumulative effects area. No measurable sediment effects to fisheries.
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game season, spring bear season and summer day use in the South Belts.	Primary use area does not result in measurable sediment effects to fisheries.
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.	No measurable sediment effects to fisheries.
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.	Road maintenance is part of road sediment effects in roads analysis, hence activity is accounted for in Roads Analysis and 2005 road sediment surveys.
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.	This developed rec. site and road access is not be connected to the surface flow system and, therefore, dropped from further consideration.
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.	Sediment accruing to Deep Creek trout reproductive habitat accounted for by core sampling critical reach for cumulative effects.
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.	Routes in this winter travel plan are accounted for in Roads Analysis and 2005 road sediment surveys.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.		Routes in this travel plan are accounted for in Roads Analysis including the 2005 road sediment surveys for Cabin G planning area.
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.		Some risk of minor sediment reaching Deep Creek from bridge approach. Sediment accruing to Deep Creek considered by core sampling critical reach for cumulative effects.
Personal use firewood cutting.	On-going	Dead trees with approximately 100 feet of existing travel routes within the analysis are being removed by the public for firewood.		No measurable effect to fisheries except potential violations of 100- foot no cut zone for firewood taking.
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres	Timber harvest disturbance on private land in upper portion of Deep Creek watershed is measured by core sampling sediment levels in the Deep Creek critical reach identified for cumulative effects analysis for Cabin Gulch project.
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		Not in fisheries cumulative effects area, therefore dropped from further consideration.
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		Housing development generally below the extent of the cumulative effects area for fisheries. Potential for future sedimentation minimal from Grassy Mtn subdivision due to general lack of surface water connectivity to Deep Creek.

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock. Based on the PFC assessment non functioning or functioning at risk in the lower end of the North Fork of Deep Creek, a riparian fence was constructed in 2006 to protect the reach. In 2007, cattle breached the fence and riparian standards were exceeded. This project will address further protecting this area and other riparian areas that are non-functioning or functioning at risk with a downward trend.	Sediment accruing to North Fork Deep Creek assessed from visual particle-size estimates in critical reach for cumulative effects. Project has potential to reduce sedimentation as a function of improving trends in bank stability and riparian standards. Trespass cows continue to be a risk.

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	Project has potential to reduce sedimentation as a function of improving trends in bank stability and riparian standards. Past efforts implementing riparian grazing standards has met with mixed success on other allotments. Trespass cows remain a risk.
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs. Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	Project has potential to reduce bank erosion and sedimentation to Deep Creek as a function of improving bank stability and riparian standards.
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	Project has potential to reduce bank erosion and sedimentation to Deep Creek as a function of improving bank stability and riparian standards.
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	Project has potential to reduce bank and riparian impacts through controlled removal of dead trees and implementation of BMPs.

RANGE

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	In existing condition as general harvesting, not specific
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		No effect
Forest Service Timber Harvest	1960 - 1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	In existing condition as general harvesting, not specific

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	In existing condition as general burning, not specific
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	In existing condition as general harvesting, not specific
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	In existing condition as general burning, not specific
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	In existing condition as general harvesting, not specific
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	No effect
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	In existing condition as general burning, not specific

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	In existing condition as general harvesting, not specific
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	In existing condition as general burning, not specific
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		No effect
Mining		Hand-scale placer mining only		No effect
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005 included seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 acres) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: 1,252 acres	In existing condition as general harvesting, not specific
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: 8,058 acres	In existing condition as general burning, not specific
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		No effect
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		No effect

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.	No effect
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.	No effect
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.	No effect

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Deep Creek Hazard Fuels	2004-present	<p>Cabin Gulch Project Area (Hand thin & burn)</p> <p>Fuels Activities 87 acres</p> <p>By HUC's</p> <p>801 (Russell Fork Deep Creek) Fuels activities 64 acres</p> <p>802 (Middle Fork Deep Creek) Fuels activities 1 acre</p> <p>804 (Upper Deep Creek) Fuels activities 446 acres</p> <p>Total: 511 acres</p>	No effect
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.	No effect
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	No effect
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	No effect
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.	Effects resource but not related to this project
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	Addressed in existing condition
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	No effect
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	No effect
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	No effect
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.	No effect
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.	No effect
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.	No effect

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.		No effect
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.		No effect
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.		No effect
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.		Addressed in report for additional travel variances if necessary for permit administration and livestock management
Halverson Road Spec. Use Permit	Spring 2008	re-issuance of existing road access permit for long-term.		No effect
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres	No effect
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		No effect
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		Effects resource but not related to this project

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock. Based on the PFC assessment non functioning or functioning at risk in the lower end of the North Fork of Deep Creek, a riparian fence was constructed in 2006 to protect the reach. In 2007, cattle breached the fence and riparian standards were exceeded. This project will address further protecting this area and other riparian areas that are non-functioning or functioning at risk with a downward trend.	Addressed in existing condition
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	Effects resource but not related to this project
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	Effects resource but not related to this project
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	Effects resource but not related to this project
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	No effects

NOXIOUS WEEDS

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest. <u>19 acres</u> Total: 48 acres	Noxious weeds were not established at this time.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		Ground disturbing activities likely introduce and spread noxious weeds. Weed treatment was likely not required at this time.
Forest Service Timber Harvest	1960 - 1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	Noxious weeds became established during the 1960's to 1989. The most common weeds to establish were Canada thistle, musk thistle and knapweed. Weed treatment was limited to chemical herbicides applied by ground treatment methods generally truck and ATV mounted sprayers. Roadsides and recreation areas were the focus of weed treatment at that time. These activities likely introduced and spread some noxious weeds in the areas of disturbance.
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	Fires that occurred in the area prior to noxious weeds becoming established in the 1906's resulted in minor infestations. Some weeds were introduced following fires once weeds were established in the area. No treatment occurred prior to the 1970's.
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	Noxious weeds became established during the 1960's to 1989. The most common weeds to establish were Canada thistle, musk thistle and knapweed. Weed treatment was limited to chemical herbicides applied by ground treatment methods generally truck and ATV mounted sprayers. Roadsides and recreation areas were the focus of weed treatment at that time. These activities likely introduced and spread some noxious weeds in the areas of disturbance.
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	Some weeds were introduced following fires once weeds were established in the area. Some treatment likely occurred where weeds were prominent.
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres	Noxious weeds became established during the 1960's to 1989. The most common weeds to establish were Canada thistle, musk thistle and knapweed. Weed treatment was limited to chemical herbicides applied by ground treatment methods generally truck and ATV mounted sprayers.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
			Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	Roadsides and recreation areas were the focus of weed treatment at that time. These activities likely introduced and spread some noxious weeds in the areas of disturbance. These areas are actively treated with appropriate control measures.
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	Noxious weeds became established during the 1960's to 1989. The most common weeds to establish were Canada thistle, musk thistle and knapweed. Weed treatment was limited to chemical herbicides applied by ground treatment methods generally truck and ATV mounted sprayers. Roadside and recreation areas were the focus of weed treatment at that time. These activities likely introduced and spread some noxious weeds in the areas of disturbance.
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	Some weeds were introduced following fires once weeds were established in the area. Some treatment likely occurred where weeds were prominent.
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	Noxious weeds became established during the 1960's to 1989. The most common weeds to establish were Canada thistle, musk thistle and knapweed. Weed treatment was limited to chemical herbicides applied by ground treatment methods generally truck and ATV mounted sprayers. Roadside and recreation areas were the focus of weed treatment at that time. These activities likely introduced and spread some noxious weeds in the areas of disturbance. These areas are actively treated with appropriate control measures.
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	Fires that occurred in the area during this time provided viable seed beds and bare ground for weeds to become established. Some weeds were introduced following fires once weeds were established in the area. Treatment likely occurred where weeds were prominent.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		Ground disturbing activities promote the spread of noxious weeds if seed is in the area or on equipment that is used. State law requires that noxious weeds area controlled. It is likely that private land weeds were treated.
Mining		Hand-scale placer mining only		Permittees are required to treat weeds following ground disturbing activities.
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005 included seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 acres) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: 1,252 acres	Noxious weeds became established during the 1960's to 1989. The most common weeds to establish were Canada thistle, musk thistle and knapweed. Weed treatment was limited to chemical herbicides applied by ground treatment methods generally truck and ATV mounted sprayers. Roadsides and recreation areas were the focus of weed treatment at that time. These activities likely introduced and spread some noxious weeds in the areas of disturbance. These areas are actively treated with appropriate control measures.
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: 8,058 acres	The Maudlow/Toston fire suppression efforts and subsequent BAER restoration work mitigated much of the weed invasion risk in the Deep Creek Corridor. Weed management and treatment was a high priority from 2001 to present
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		The Maudlow/Toston fire suppression efforts and subsequent BAER restoration work mitigated much of the weed invasion risk in the Deep Creek Corridor. Weed management and treatment was a high priority from 2001 to present
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		The Maudlow/Toston fire suppression efforts and subsequent BAER restoration work mitigated much of the weed invasion risk in the Deep Creek Corridor. Weed management and treatment was a high priority from 2001 to present
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.		This is not a ground disturbing activity. There is no effect to noxious weeds from this activity.
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.		This is not a ground disturbing activity. There is no effect to noxious weeds from this activity.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.	Weed treatment occurred following this activity.

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Deep Creek Hazard Fuels	2004-present	<p>Cabin Gulch Project Area (Hand thin & burn)</p> <p>Fuels Activities 87 acres</p> <p>By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: 511 acre</p>	Weed treatment occurred following this activity.
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.	Weed treatment is scheduled as needed for this area.
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	This is not a ground disturbing activity. There is no effect to noxious weeds from this activity.
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	This is not a ground disturbing activity. There is no effect to noxious weeds from this activity.
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.	Weeds are mapped and scheduled for treatment as necessary in this area.
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	Noxious Weeds became established and began to expand. It is difficult to determine if grazing animals introduced weeds into the Cabin Gulch area as weeds typically are first identified along roadsides and trails. Livestock management could have contributed to use of roads and trails in the project area and that may have introduced noxious weeds.
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	Permittees are required to treat weeds following ground disturbing activities.
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	This is not a ground disturbing activity. Weed-seed free certified feed is required. There is no effect to noxious weeds from this activity.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.	This is not a ground disturbing activity. Weed-seed free certified feed is required. There is no effect to noxious weeds from this activity.
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.	Weeds are mapped and scheduled for treatment as necessary in this area.
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.	Weeds are mapped and scheduled for treatment as necessary in this area.
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.	Weeds are mapped and scheduled for treatment as necessary in this area.
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.	Special use permit holders are required to control noxious weeds associated with the permit.
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.	Weeds are mapped and scheduled for treatment as necessary in this area.
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.	Weeds are mapped and scheduled for treatment as necessary in this area.
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.	Special use permit holders are required to control noxious weeds associated with the permit.
Private Land Timber Sale	2005 – 2007	<p>Cabin Gulch Project Area</p> <p>Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres</p> <p>By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres</p>	These activities likely introduced and spread some noxious weeds in the areas of disturbance. State law requires control of State noxious weed species.
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.	These activities likely introduced and spread some noxious weeds in the areas of disturbance. State law requires control of State noxious weed species.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.	These activities likely introduced and spread some noxious weeds in the areas of disturbance. State law requires control of State noxious weed species.

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock.	Weeds have been mapped and scheduled for treatment in this allotment.
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	Weeds have been mapped and scheduled for treatment in these allotments.
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	These activities are minor in terms of ground disturbance. Any weeds in the area would be treated following disturbance.
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	These activities are minor in terms of ground disturbance. Any weeds in the area would be treated following disturbance.
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	These activities are minor in terms of ground disturbance. Any weeds in the area would be treated following disturbance.

**RECREATION
PAST ACTIVITIES**

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	Addressed in write-up
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		No effect
Forest Service Timber Harvest	1960 - 1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	Addressed in write-up
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	No effect
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	Addressed in write-up

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities 6 acres Total: 6 acres	No effect
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	Addressed in write-up
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	No effect
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	No effect
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	Addressed in write-up
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	No effect

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		No effect
Mining		Hand-scale placer mining only		No effect
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005</i> included seasonal closures of roads in Sulphur Bar & Black Butte. <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: <u>Grassy Bugs Salvage '04</u> (200 acres) & <u>Greyson Bugs '05-'07</u> (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: 1,252 acres	No effect
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: 8,058 acres	Addressed in write-up
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		No effect
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		No effect
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.		Not addressed, but minor effect
Insecticide apply	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.		No effect
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.		Outside project area, no effect

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Deep Creek Hazard Fuels	2004-present	Cabin Gulch Project Area (Hand thin & burn) Fuels Activities 87 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: 511 acres	Not addressed, minor to no effect
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.		Addressed in write-up
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.		No effect
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).		No effect
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.		No effect
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)		No effect
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.		No effect
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.		Minimal to no effect
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.		Addressed in write-up
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.		Addressed in write-up
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.		Addressed in write-up
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.		Beneficial effect, not addressed in write-up
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.		Addressed in write-up
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.		Addressed in write-up

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.		Addressed in write-up
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.		Addressed in write-up
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.		No effect
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres	Addressed in write-up
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		No effect
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		Not addressed, minimal effect

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock.	No effect

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	No effect
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No effect
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No effect
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	Minor delays in traffic could occur, some sights and sounds altered by recreationists in vicinity of activity. Some short-term closures could occur while activities are on-going.

TRANSPORTATION

All activities considered and addressed in specialist's report.

VISUALS/SCENERY

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest. <u>19 acres</u> Total: 48 acres	Past treatments are 50+ years old and beginning to visually recover. Trees are growing to a point where harvest lines are not as sharp and harvest units are not as geometric in shape. Most of these older units meet the assigned VQO's in these areas.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		Most visual effects of these past activities have faded to the point of not being visually evident to casual forest visitors. The Forest Plan VQOs are being met in these areas.
Forest Service Timber Harvest	1960 - 1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	Past treatments are 40-50 years old and beginning to visually recover. Trees are growing to a point where harvest lines are not as sharp and harvest units are not as geometric in shape. Most of these older units meet the assigned VQO's in these areas.
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	Effects of these past fuels activities are not visually evident to casual forest visitors. The Forest Plan VQOs are being met.
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	Past treatments are 30-40 years old and beginning to visually recover. Trees are growing to a point where harvest lines are not as sharp and unit shapes are not as geometric. Most of these older units meet the assigned VQO's in these areas..
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	Not evident to casual forest visitors. The Forest Plan VQOs are being met.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	Past treatments are 20-30 years old and are visible feature on the landscape. Lines created by harvest unit boundary lines and constructed roads can be viewed from some of the main roads and trails within the project area. Most of these older units meet the assigned VQO's in these areas.
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	Some effects from timber harvesting on private lands may be visible from certain location on roads and trails within the project area. These effects may be both short and long term
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	Not evident to casual forest visitors. Will meet the Forest Plan VQOs.
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	Past treatments are 10-20 years old and are visible features on the landscape. Lines created by harvest unit boundary lines and constructed roads can be viewed from some of the main roads and trails within the project area. Most of these older units meet the assigned VQO's in these areas.
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	Not evident to casual forest visitors. Will meet the Forest Plan VQOs.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		Short term visual effects included the presence of construction equipment during implementation and the visible evidence of exposed ground surfaces immediately afterward. Long term visual effects are generally unnoticed by casual forest visitors.
Mining		Hand-scale placer mining only		Not evident to casual forest visitors. Will meet the Forest Plan VQOs.
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005 include seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 acres) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: 1,252 acres	Past treatments are less than 10 years old and are visible features on the landscape. Lines created by harvest unit boundary lines and constructed roads can be viewed from some of the main roads and trails within the project area. These past harvest treatments meet Forest Plan VQOs.
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: 8,058 acres	Evidence of the recent 2000 Fire activity is still an obvious visual feature on the landscape. These visual effects will continue to fade with time. The effects of the wild fire are beginning to blend with naturally occurring vegetation patterns in the project area. These effects meet the Forest Plan VQOs.
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.		Not evident to casual forest visitors. Will meet the Forest Plan VQOs.
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).		Visually present but not dominant features and generally, not evident to casual forest visitors. Will meet the Forest Plan VQOs.
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.		Pheromone caps are generally very evident to the casual forest visitor, particularly, if they are located near main roads and/or trails. Since these products are generally short term, so are their effects. VQOs will be met in the long term.
Insecticide apply	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.		"Acecaps" are placed just under the bark of individuals trees generally at the base of

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
			the tree. Some individualized marks of sawdust may be visible but these are minor. The casual forest visitor will likely not notice any visual effects. Forest Plan VQOs will be met.
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.	Depending upon location, cross country ski trails may be evident to forest visitors. If located on existing roads/trails the ski trails will have minimal to no effect. If trail construction is necessary, exposed ground surfaces and lines across the landscape and through the trees may be evident. These visual effects are considered to be minor and will meet the VQOs of the Forest Plan for this area.

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Deep Creek Hazard Fuels	2004-present	Cabin Gulch Project Area (Hand thin & burn) Fuels Activities 87 acres By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: 511 acres	Visual effects of hand thinning are most noticed by the resulting red-needled slash created. This slash generally loses its needles and blends visually within 1-3 years after treatment. Underburning can create the visual effects in the short term of blackened ground surfaces and charred forest floor vegetation. These effects will dissipate as a flush of spring time growth appears the following season. Some charring on tree bowls can be evident for up to 5 years. Occasionally, individual and small groups of trees are killed by under burns and are most noticed by their bright red needles shortly after the burns have taken place. These trees will lose these needles between 1-3 years after implementation and will naturally blend with the surrounding forest. These fuels treatments will meet the Forest Plan VQOs in the project area.
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.	Operation and maintenance at this site will create minimal short term visual effects. These activities meet the Forest Plan VQOs.
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	No long term visual effects. Meets the Forest Plan VQOs.
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	No long term visual effects. Meets the Forest Plan VQOs.

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek area. June – August. Three drives per season.	Minimal short term visual effects in immediate area of cattle drive. No long term visual effects. Meets the Forest Plan VQOs.
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle.(see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	Minimal short term visual effects in areas of heaviest use. Meets the Forest Plan VQOs.
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	Minimal short term visual effects noted by areas of exposed soils and displaced rock and gravel. Meets the Forest Plan VQOs.
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horse pack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	Short term visual effects noted by wilted plants and presence of the smell of herbicide. Long term visual effects generally not evident to casual forest visitors. Meets the Forest Plan VQOs.
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	Overnight camp has minor visual effects due to vegetation and soil trampling. Meets the Forest Plan VQOs.
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game season, spring bear season and summer day use in the South Belts.	No visual effects. Meets the Forest Plan VQOs.
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.	Maintenance effects are generally not evident to casual forest visitors. Meets the Forest Plan VQOs.
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.	Short term visual effects noticed as spots of lighter colored material on and around the existing road prism. No long term visual effects. Meets the Forest Plan VQOs.
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.	Operation and maintenance at this site will create minimal short term visual effects. These activities meet the Forest Plan VQOs.
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.	No visual effects. Meets the Forest Plan VQOs.
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.	Winter signing is most noticed by recreating public in winter. Meets the Forest Plan VQOs.
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.	New signing and gate installation creates new short term visual effects. Meets the Forest Plan VQOs.
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.	No visual effects. Meets the Forest Plan VQOs.

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Personal use firewood cutting.	On-going	Dead trees with approximately 100 feet of existing travel routes within the analysis are being removed by the public for firewood.		Short term visual effects of cut stumps and slash near main road ways. No long term visual effects. Meet the Forest Plan VQOs.
Private Land Timber Sale	2005 – 2007	Cabin Gulch Project Area Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres 802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres 803 (North Fork Deep Creek) Intermediate harvest: 192 acres 804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres	Some effects from timber harvesting on private and state lands may be visible from certain location on roads and trails within the project area. These effects may be both short and long term.
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		Short term visual effects include the presence of construction equipment and the visible evidence of exposed ground surfaces. Long term visual effects are generally unnoticed by casual forest visitors.
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		Construction of housing developments and road construction may be visible from main roads and trails in the project area. These effects will be long term.

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock. Based on the PFC assessment non functioning or functioning at risk in the lower end of the North Fork of Deep Creek, a riparian fence was constructed in 2006 to protect the reach. In 2007, cattle breached the fence and riparian standards were exceeded. This project will address further protecting this area and other riparian areas that are non-functioning or functioning at risk with a downward trend.	Installation of fencing and water developments in areas that do not have these features creates both short and long term effects. These activities will meet the Forest Plan VQOs.
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would	Installation of fencing and water developments in areas that do not have these features creates both short and long term effects. These activities will meet the VQOs.

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
		be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	
Sulphur Bar Riparian Fencing	Summer 2008	Four fence enclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the enclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	Installation of fencing can create both short and long term effects. This activity will meet the VQOs.
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence enclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	Installation of fencing can create both short and long term effects. This activity will meet the VQOs.
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	Short term visual effects noticed as stumps and slash may be seen around the existing road prism. No long term visual effects. Meets the Forest Plan VQOs.

HERITAGE

All activities considered and addressed in specialist's report

MINERALS/LANDS/SPECIAL USES

PAST ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Forest Service Timber Harvest	Pre 1960	Cabin Project Area Regeneration harvest: 29 acres Intermediate harvest: <u>19 acres</u> Total: 48 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 29 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>19 acres</u> Total: 48 acres	No effect
Mining	1950's or 60's	Small scale hard rock mining near Edith Lake trail/trailhead; placer activity on private property.		No effect
Forest Service Timber Harvest	1960 - 1969	Cabin Project Area Regeneration harvest: 865 acres Intermediate harvest: <u>230 acres</u> Total: 1,095 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 617 acres 803 (North Fork Deep Creek) Regen harvest: 483 acres	No effect

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
			Intermediate harvest: 230 acres 804 (Upper Deep Creek) Regen harvest: 457 acres Intermediate harvest: <u>112 acres</u> Total: 1,899 acres	
Fire	1960-1969	Cabin Project Area Fuels Activities: <u>84 acres</u> Total: 84 acres	By HUC's 802 (Middle Fork Deep Creek) Fuels activities 25 acres 803 (North Fork Deep Creek) Fuels activities 59 acres 804 (Upper Deep Creek) Fuels activities <u>169 acres</u> Total: 253 acres	No effect
Forest Service Timber Harvest	1970 - 1979	Cabin Project Area Regeneration harvest: 408 acres Intermediate harvest: <u>97 acres</u> Total: 505 acres	By HUC's 802 (Middle Fork Deep Creek) Intermediate harvest: 2 acres 803 (North Fork Deep Creek) Regen harvest: 354 acres Intermediate harvest: 97 acres 804 (Upper Deep Creek) Regen harvest: <u>309 acres</u> Total: 762 acres	No effect
Fire	1970-1979	Cabin Project Area Total: 0 acres	By HUC's 804 (Upper Deep Creek) Fuels activities <u>6 acres</u> Total: 6 acres	No effect
Forest Service Timber Harvest	1980 - 1989	Cabin Project Area Regeneration harvest: 639 acres Intermediate harvest: <u>322 acres</u> Total: 961 acres	By HUC's 801 (Russell Fork Deep Creek) Regen harvest: 17 acres 802 (Middle Fork Deep Creek) Regen harvest: 469 acres Intermediate harvest: 110 acres 803 (North Fork Deep Creek) Regen harvest: 193 acres Intermediate harvest: 260 acres 804 (Upper Deep Creek) Regen harvest: 184 acres Intermediate harvest: <u>62 acres</u> Total: 1,295 acres	No effect
Private land timber harvest	1980-1989	Cabin Project Area Intermediate harvest: 70 acres	By HUC's 803 (North Fork Deep Creek) Intermediate harvest: 70 acres	No effect

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Fire	1980-1989	Cabin Project Area Total: 0 acres	By HUC's 801 (Russell Fork Deep Creek) Fuels activities 11 acres 804 (Upper Deep Creek) Fuels activities <u>100 acres</u> Total: 111 acres	No effect
Forest Service Timber Harvest	1990 – 1999	Cabin Project Area Regeneration harvest: 8 acres Intermediate harvest: <u>136 acres</u> Total: 144 acres	By HUC's 802 (Middle Fork Deep Creek) Regen harvest: 8 acres Intermediate harvest: 136 acres 803 (North Fork Deep Creek) Intermediate harvest: <u>41 acres</u> Total: 185 acres	No effect
Fire	1990-1999	Cabin Project Area Fuels Activities: <u>1 acre</u> Total: 1 acre	By HUC's <i>Ray Creek and Greyson projects</i> 802 (Middle Fork Deep Creek) Fuels activities 1 acres 803 (North Fork Deep Creek) Fuels activities 1 acres 804 (Upper Deep Creek) Fuels activities <u>154 acres</u> Total: 156 acres	No effect
Private Land Deep Creek Coop. Rest.	Phase I 1996-99 Phase II complete 2000	Treatments to stabilize banks and enhance fish habitat along approx 19-mile length of Deep Creek. Partnership between private landowners, Broadwater Conservation District and Montana Fish Wildlife and Parks.		No effect
Mining		Hand-scale placer mining only		Addressed in Write-up
Forest Service Timber Harvest	2000-present	Cabin Project Area Total: 0 acres	By HUC's <i>Maudlow-Toston Salvage, 2003-2005</i> <i>included seasonal closures of roads in Sulphur Bar & Black Butte.</i> <i>Black Butte Salvage 2004: no new roads.</i> <i>*Note: Grassy Bugs Salvage '04 (200 acres) & Greyson Bugs '05-'07 (240 acres) occurred in the South Belts but NOT in these effects boundaries.</i> 804 (Upper Deep Creek) Regen harvest: <u>1,252 acres</u> Total: 1,252 acres	Addressed in write-up
Fire	2000 to present	Cabin Project Area (portion of Maudlow-Toston Wildfire) Wildfire: <u>250 acres</u> Total: 250 acres	By HUC's Maudlow-Toston wildfire, 2000, 81,691 acres total, not all within effects boundaries) 804 (Upper Deep Creek) Wildfire <u>8058 acres</u> Total: 8,058 acres	No effect

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Maudlow-Toston BAER Projects	2000-2001	Various projects including post-fire seeding with annual grasses, erosion control.	No effect
Maudlow-Toston Fire Rehab	2001-2004	Various projects (road repair/maintenance, erosion control, aspen fencing, weed treatment).	No effect
Pheromone Control	2002	Placement of MCH caps, occurred just w/in Cabin Gulch area.	No effect
Insecticide application	2003	Placement of "Acecaps" at base of 100 trees to improve cone production.	No effect
Skidway Cross Country Ski Trail	2003	Constructed approx. 3 miles of trail for x-country skiing.	No effect

ON-GOING ACTIVITIES

Activity/Name	Decade/Year	Scope of Activity	Resource Effects
Deep Creek Hazard Fuels	2004-present	<p>Cabin Gulch Project Area (Hand thin & burn)</p> <p>Fuels Activities 87 acres</p> <p>By HUC's 801 (Russell Fork Deep Creek) Fuels activities 64 acres 802 (Middle Fork Deep Creek) Fuels activities 1 acre 804 (Upper Deep Creek) Fuels activities <u>446 acres</u> Total: 511 acres</p>	No effect
Deep Creek Picnic Area	On-going	Reopened in 2005 (closed 2001-2005 due to mud slide). Day use only. 5/15 – 10/15.	No effect
Frank Flynn Memorial Cabin	On-going	Recreation special use permit, to non-profit organization. Over-night use April – November.	No effect
Grassy Mountain Lodge	On-going	Outfitter and guide special use permit for non-consumptive use, horseback and camping trips (6/1 – 9/1).	No effect
MT High Country Cattle Drive	On-going	Recreation special use permit for cattle drive in Dry Creek, Ridge Road area. June – August. Two drives per season.	No effect
Livestock Grazing Permits	On-going	S. Belts area includes 10 allotments; 1 sheep and all others cattle. (see South Belts Ecosystem Watershed Analysis for more detail – pgs. 14-20)	No effect
Mining Activity	On-going	Overall, permitted mining activity in the S. Belts in recent years has been limited to hand work.	Addressed in write-up
Noxious Weed Treatment	On-going	Herbicide treatment is primarily along roads and in patches that are accessible to mechanized equipment, and backpack/horsepack equipment; some biocontrol treatment (insects), grazing control (sheep), and mechanical.	Minimal to no effect
Rams Horn Outfitting	On-going	Outfitter and guide special use permit for big game and spring bear seasons; overnight camp in Birch Creek basin with access from Edith Lake trailhead.	Addressed in recreation write-up
Hidden Hollow Hideaway	On-going	Outfitter and guide special use permit for big game and spring bear seasons in the South Belts.	Addressed in recreation write-up

Activity/Name	Decade/Year	Scope of Activity		Resource Effects
Rillway Cabin	On-going	Cabin on FS rental system. On-going maintenance occurs. Year-round overnight use.		Addressed in recreation write-up
Road Maintenance	Annual	Grading & spot-gravelling performed on approx. 25 miles in the S. Belts annually.		Beneficial effect, not addressed in write-up
Skidway Campground	On-going annual use & maintenance	Developed recreation site, overnight use (free-use facility). Season of use 5/15 – 11/15.		No effect
Sun Mountain Log Road Permit	2005 - 2007	Permits log haul on approx. ¼ mile of FS road; approx. 21 mmbf of timber from private land.		No effect
South Belts Winter Travel Plan	Implementation on-going	Includes travel decision for 12/2-5/15 for roads & areas in South Belts Travel area (Mt. Boulder Baldy south to Dry Creek, 130,000 acres). Snowmobile & wheeled vehicle use largely prohibited in winter range areas w/ exception of designated routes through winter range to get to off-route snowmobile areas. Non-motorized cross country ski trails & areas also identified.		Addressed in write-up
South Belts Travel Management Plan	Implementation to begin summer 2008	Includes travel decision to designate open and closed motorized roads & trails during the period of 5/15 – 12/1. Requires the installation of gates and signs to clarify changes to the transportation system on the ground.		No effect
Halverson Road Spec. Use Permit	Spring 2008	Re-issuance of existing road access permit for long-term.		No effect
Private Land Timber Sale	2005 – 2007	<p>Cabin Gulch Project Area</p> <p>Regen harvest (RG): 49 acres Intermediate harvest : <u>627 acres</u> Total: 676 acres</p>	<p>By HUC's</p> <p>801 (Russell Fork Deep Creek) Regen harvest: 1,443 acres Intermediate harvest: 2,821 acres</p> <p>802 (Middle Fork Deep Creek) Regen harvest: 47 acres Intermediate harvest: 400 acres</p> <p>803 (North Fork Deep Creek) Intermediate harvest: 192 acres</p> <p>804 (Upper Deep Creek) Intermediate harvest: <u>118 acres</u> Total: 5,021 acres</p>	No effect
Private Land Watershed Restoration Plan	On-going	Plan developed jointly with FS; most recommended projects are on private land, addressing private land practices.		No effect
Private Land Development	On-going	Development for housing in several areas, including W. Flanks of Belts (especially in N. Fk. Deep Creek, Ross Gulch), along Deep Creek, at Grassy Mountain Subdivision.		Addressed in write-up

FORESEEABLE FUTURE ACTIVITIES

Activity/Name	Est. Implementation	Scope of Activity	Resource Effects
Ray Creek Allotment	Summer 2008	This proposal would reauthorize grazing on Ray Creek consisting of 3,926 acres. Improvements to the allotment would include reconstructing approximately 2 miles of fence and one water development, constructing approximately 3 new water developments to potentially improve riparian conditions and distribution of the livestock.	No effect
Deep/Grassy Allotment	Summer 2008	This proposal would reauthorize grazing on two allotments, Deep Creek and Grassy Mountain allotments. Grazing would continue on 12,217 acres of the Deep Creek allotment. To potentially improve riparian conditions and distribution of the livestock, construction of approximately 5 miles of new fence, 5 new water developments and reconstruction of 5 existing water developments. Also with this proposal, grazing would be reauthorized on the Grassy Mountain allotment, consisting of 5,351 acres and include approximately 2 miles of new fence and constructing approximately 5 new water developments to potentially improve riparian conditions and distribution of the livestock.	No effect
Sulphur Bar Riparian Fencing	Summer 2008	Four fence exclosures are proposed; each enclosing a segment of stream channel and surrounding wet meadows and springs Willow cuts from Deep Creek will be planted within the exclosures. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No effect
Carl & Cedar Bar Creeks Riparian Fencing	Summer 2008	Three fence exclosures are proposed, each enclosing about ½ mile of stream channel and surrounding wet meadows. This proposal would allow riparian areas to move toward properly functioning condition and meet riparian grazing guidelines.	No effect
Forest Wide Hazardous Tree Removal Project	Fall 2009	Removal of hazardous trees and fuels along heavily traveled open roads, campgrounds and administrative sites.	No effects.

ECONOMICS

All activities considered and addressed in specialist's report