

Chapter 3: The Affected Environment and Environmental Consequences

Introduction

This chapter describes general information, location, management direction, and existing conditions for the project area. It also describes the environmental impacts of the alternatives described in Chapter 2. Information in this chapter is based on reports written by various resource specialists (Appendix E – List of Preparers). These more detailed reports are kept in the Project File located at the Swan Lake Ranger District Office. Analysis in the chapter is the basis for the summary of alternative comparisons given in Chapter 2.

The affected environment and environmental consequences are combined into one chapter for continuity and ease of reading. After providing the location and the Forest Plan management direction, this chapter discusses specific resources and issues.

Project Area

The Cooney McKay Project Area is located in the Swan Valley near Condon, Montana. The project area stretches from the Swan Mountain Range to the east, Highway 83 to the west, Cooney/Rumble Creek Divide to the south, and Lion/Meadow Creek to the north. Elevation within the project area ranges from 3400 feet along the Swan River to nearly 8900 feet near Cooney Mountain on the Swan Crest (See Vicinity Map 1-1 displaying the Cooney McKay Project Area).

Definitions

The following definitions should help the reader understand terms describing the analysis areas used to disclose the environmental consequences of implementing the alternatives:

Project Area

As shown on Vicinity Map 1-1, the project area includes approximately 38,031 acres. National Forest System (NFS) lands occupy 21,800 acres of the project area (57 percent); Plum Creek Timber Company (PCTC) owns about 10,068 acres (27 percent); and other private landowners own about 6,163 acres (16 percent).

Analysis Area

The area used for determining direct, indirect, and cumulative effects for the natural resources considered in this analysis. Note, the spatial and temporal bounds of the analysis (affected) area used for the effects analysis have been identified and described for each natural resource area included in this analysis and may vary from resource area to resource area.

Grizzly Bear Subunit

A grizzly bear subunit is an area approximately the size of an average annual female home range (about 50 square miles), generally from ridge top to valley bottom, and including all seasonal habitats. The Cooney McKay Project Area falls within Meadow Smith Grizzly Bear Subunit. The proposed management actions included in all action alternatives comply with the Swan Valley Grizzly Bear Conservation Agreement (SVGBCA) (Project File Exhibit Q-4).

Affected Environment Analysis

The resource information provided in the Affected Environment narratives includes the effects of past actions, assessing them as part of the existing condition of the landscape. For instance, consider a hypothetical example of a past timber sale in 1979 harvesting 150 acres of forest and constructing two miles of new road within the Holland Pierce Fuels Reduction and Forest Health Project Area. The effects of the harvest and road construction as well as the vegetation re-growth and roadbed stabilization occurring over the past 25 years would be accounted for in several assessments of the affected environment based on the specific resource being analyzed. Following are a few illustrations of the consideration of past actions in the affected environment with a scenario of this type:

- The change in forest structure from this past regeneration harvest would be displayed in the existing successional stage distribution disclosure in the vegetation section. Field examinations indicate this 150-acre harvest area supports a fully stocked stand of 20 foot trees and has progressed into a mid-seral successional stage over the past 25 years. This information would be included in the acreage of mid-seral successional classification and used in disclosure of existing vegetation and wildlife habitat conditions.
- The existing level of past regeneration harvest in the project area would include the 150 acres from this activity.
- Stream channel surveys assessing stream conditions in the project area would reflect any remaining physical and biological effects of the past timber sale and road construction. These field classifications of existing conditions of specific streams would be disclosed in the Affected Environment Section.
- The present contribution of sediment and increased stream flow from the two miles of road construction would also be accounted for in the calculation of existing watershed conditions as specific road segments and their construction dates are entered into the WATSED models. Likewise, any residual effects of the 150-acre harvest unit would be reflected in the existing condition model outputs based on vegetative recovery validated through field and aerial photo reconnaissance.
- Field examinations of road conditions would provide additional data on residual contributions of sediment from the two miles of road. These effects would be incorporated into existing road condition disclosures and provide a basis for proposed BMP projects for improved drainage, if needed.

Specific past actions considered in the Cooney McKay Project environmental analyses are summarized in Table 3-1 below. Project File Section R provides detailed information for these actions. A list of past actions is not necessarily exhaustive as records may not exist for all past

activities (by project). This is particularly true for those actions that predate the passage of the NEPA in 1970. Nevertheless, the effects of such past actions are fully accounted for in the assessment of existing condition as the current condition assessment necessarily reflects the impact of such actions (to the extent they are still affecting the particular resource considered).

Environmental Consequences

The Environmental Consequences Section details the environmental effects that would occur for each alternative. It forms the scientific and analytical basis for the alternative comparisons presented at the end of Chapter 2 and in the Summary (40 CFR 1502.16). Information used to assess effects is based on the consideration of the best available sciences. The effects of Alternative 1 (No Action Alternative) form a baseline against which action alternatives are evaluated. Each narrative begins with a brief explanation of how effects were analyzed and the models used for each resource. When the effects or impacts are associated with an issue, as described in Chapter 2, their relevance and connectedness with the issue are discussed and play an important role in the evaluation of alternatives.

Environmental effects can be direct, indirect, or cumulative. They can be long or short in duration. Effects can be quantitative or qualitative, adverse or beneficial, actual or potential. It is important to consider timing and location of effects. Direct effects are those caused by the action and occur at the same time and place. Indirect effects are those caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR 1508.8). In most cases direct and indirect effects are discussed together. Cumulative effects are those that result from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions (40 CFR 1508.7). Therefore, the discussion of effects first considers the direct and indirect effects of each alternative and does not consider cumulative effects unless direct and indirect effects exist.

As the effects on a resource for each alternative are read, the supplemental maps should be referred to for the location of activities and area of analysis.

Discussions at the end of each resource section include a description of the Regulatory Framework associated with that resource. Environmental laws such as the NFMA, ESA, Clean Water Act, and Clean Air Act provide the direction to the Forest Service for management of forest resources. These laws are interpreted and defined through the Code of Federal Regulations (CFRs), Administrative Rules of Montana (ARMs), Land and Resource Management Plan (LRMP) direction, Forest Service Manual (FSM) direction, and Forest Service policy. The Regulatory Framework associated with each resource is helpful in relating national and Forest direction to resource analysis procedures.

The cumulative effects analysis includes the additive effect of the action being considered when added to the effects of past, present, and reasonably foreseeable future actions. As past actions are already included in the affected environment, cumulative effects analysis builds upon this existing condition assessment by considering the incremental addition of direct and indirect effects of proposed as well as present and reasonably foreseeable actions. While impacts can be differentiated by direct, indirect, and cumulative, the concept of cumulative impacts takes into account all disturbances since cumulative impacts result in the compounding of the effects of all actions over time.

Detailed descriptions of foreseeable actions and Cumulative Effects Worksheets by natural resource are filed in the Cooney McKay Project File. The cumulative effects analysis for each resource area

considered only those actions that would have measurable effects. Reasons as to why other actions had no effects are documented in the project file and are not elaborated on further in this chapter.

Table 3-1 provides a summary of the actions considered in the cumulative effects analysis for the Cooney McKay Project. Additional information such as maps and specific details such as the timing, type, location, and scale of these past, present, and future actions is also included in the project file. The effects of these activities are discussed by resource in Chapter 3 - Affected Environment and Environmental Consequences.

Past Actions

Past Actions are management activities (timber harvest and prescribed burning) and events (wildfire) that occurred in the analysis area. The effects of these activities and events provide baseline conditions for the affected environment resources existing in the analysis area, which are described in Chapter 3 of this document. Additional information is contained in the project file for each of the resources. Records of past activities and events for the analysis area were examined from years 1950 to 2007. Activities recorded during this time are listed in Table 3-1.

**TABLE 3-1.
PAST ACTIONS CONSIDERED IN THE CUMULATIVE EFFECTS ANALYSIS**

Action	Description	Unit of Measure			
Forest Service Lands					
Fuels Management, Wildfire Suppression, and Vegetation Management Activities within the Cooney McKay Project Area	Ecosystem Burning (1959-2007)	200 acres - Dog Creek 40 acres - Simpson Creek			
	Vegetation Management (1959-2007)	Regeneration Harvest 3327 acres	Intermediate Harvest 1443 acres		
Road Management/Maintenance within the Cooney McKay Project Area	Road Management	66.4 Miles of Forest Development Roads 25.4 miles – Category 1 - Open – No Legal Restrictions 12.7 miles –Category 13 - Highway Traffic 28.3 miles – Category 5 –Some Motorized Traffic			
Special Use Permits (SUP) within the Cooney McKay Project Area	Section 22 T22N R17W – Power line; Section 34 T22N R17W – Power line; Section 22 T22NR17W – 2 FLPMA Road Permits; Section 15 T21N R16W – Outfitter SUP; Section 17 T21N R16W – FRTA Road Easement; Section 20 T21N R16W – FRTA Road Easement; Section 29 T21N R16W – FRTA Road Easement; Section 30 T21N R16W – FRTA Road Easement; Section 8 T21N R17W FRTA Road Easement; Section 8 T21N R17W – 2 FLPMA Road Permits; Section 14 T21N R17W – Power line; Section 15 T21N R17W – FRTA Road Easement; Section 22 T21N R17W – Power line; Section 25 T21N R17W – Park, Playground; Section 25 T21N R17W – Power line; Section 36 T21N R17W – Government-owned Building; Section 36 T21N R17W – Power line.				
Noxious Weed Management within the Cooney McKay Project Area	Efforts to control infestations of noxious weeds and reduce new infestations are ongoing and would continue through the foreseeable future. All activities comply with the 2001 Flathead National Forest Noxious and Invasive Weed Control EA and DN.				

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TABLE 3-1.
PAST ACTIONS CONSIDERED IN THE CUMULATIVE EFFECTS ANALYSIS

Action	Description	Unit of Measure
Land Acquisition	Acquisition of PCTC Lands within the Cooney McKay Project Area	640 acres T20NR17W Section 19 (1997)
	Acquisition of PCTC Lands within the Swan Valley	640 acres T20NR17W Section 19 (1997) 640 acres T20NR18W Section 13 (1997) 741 acres T19NR17W Sections 11/22 (1998) 1803 acres T19NR17W Sections 26/27/35 (1998)
Private and Industrial lands		
PCTC Fuels Management, Wildfire Suppression, and Vegetation Management Activities within the Cooney McKay Project Area	Vegetation Management (1974-2007)	Regeneration Harvest 9119 acres
Road Management, Maintenance, and Closures within the Cooney McKay Project Area	PCTC Roads	60.6 miles
	PCTC Road Maintenance (1998 – 2006)	67.1 miles
	Private Roads	16.7 miles 1 mile Category 1 – Open – No Legal Restrictions 15.7 miles Category 17 – Private Land – No Public Access
	Missoula County Roads	11.2 miles
	State of Montana Roads	11.2 miles – Montana Highway 83
	Sale of PCTC Lands within the Cooney McKay Project Area (2002 – 2006)	640 acres T20NR16W Section 5 (Private) (2002) 320 acres T21NR16W Section 33 (Private) (2002) 1 acre T21NR17W Section 03 (Private) (2003) 640 acres T21NR17W Section 3 (TPL) (2003) 157 acres T20NR17W Section 1 (Private) (2006) 319 acres (T21NR16W Section 33 (Private with Conservation Deed) (2006) 640 acres T21NR17W Section 35 (TPL) (2006)
PCTC Land Sales	PCTC Lands Sales within the Swan Valley (2002-2006)	44 parcels totaling 15,705 acres. - 11,489 acres sold to conservation buyers - 4,216 acres sold to private parties - 549 acres sold to private parties with conservation easements
Private Land Development within the Cooney McKay Project Area	Lake County	No subdivision applications in Lake County Portion of the Project Area
	Missoula County	No subdivision applications in Missoula County Portion of the Project Area

TABLE 3-1.
PAST ACTIONS CONSIDERED IN THE CUMULATIVE EFFECTS ANALYSIS

Action	Description	Unit of Measure	
Montana State and Counties (Missoula & Lake)			
State of Montana Timber Harvest	Vegetation Management within the Cooney McKay Project Area	No Montana State lands lie within the Project Area	
	Vegetative Management within the Swan Valley (1971 – 2006)	Regeneration Harvest 9460 acres	Intermediate Harvest 2192 acres
All Forest Lands (NFS, Public & Timber Industry) Actions			
Dispersed Recreation	The area offers a variety of motorized and non-motorized year-round recreation opportunities including, hiking, cross-country skiing, mountain biking, hunting, fishing, gathering forest products, driving for pleasure, and snowmobiling. A popular dispersed recreation site is located on Pony Creek. Smith Creek Pass Trail #29 and East Foothill Trail #192 are Forest Development Trails located within the Project Area. An outfitter currently operates in the Squeezee, Lion, and Pony Creek drainages.	X	

Present and Reasonably Foreseeable Actions

Present and Reasonably Foreseeable Actions are management activities or projects planned by the Forest Service, other government agencies, or private landowners in or near the analysis area, which could occur regardless of which alternative is selected for implementation. Present and Reasonably Foreseeable Actions are activities or projects that are ongoing or will be implemented within the next 10 years, including those that would recur annually.

Present and Reasonably Foreseeable Actions are displayed in Table 3-2.

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TABLE 3-2.
PRESENT AND REASONABLY FORESEEABLE ACTIONS CONSIDERED IN THE CUMULATIVE EFFECTS ANALYSIS

Action	Description	Present	Reasonably Foreseeable
Forest Service Lands			
Fuels Management, Wildfire Suppression, and Vegetation Management Activities within the Cooney McKay Project Area	Fire Suppression Activities will occur as needed. Control of wildfires will follow Forest Plan standards for the affected Management Areas	X	X
	The Meadow Smith Sale includes 376 acres of Intermediate Harvest and 993 acres of Regeneration Harvest		X
	Condon Fuels Reduction Project includes 321 acres of Intermediate harvest and 12 acres of Timber Stand Improvement Activities		X
	Ecosystem Burning - Meadow Smith Sale – 166 acres		X
	Prescribed and/or Light Underburning without Associated Harvest – Meadow Smith Sale – 111 acres	X	X
	Efforts to control infestations of noxious weeds and reduce new infestations are ongoing and would continue through the foreseeable future. Control actions may include hand spraying herbicides, hand pulling, and biological control. All activities would comply with the 2001 Flathead National Forest Noxious and Invasive Weed Control EA	X	X
Road Management/Maintenance within the Cooney McKay Project Area	Construction – Temporary Road 3.3 miles – Meadow Smith Project	X	X
	Application of BMPs 2.93 miles - Condon Fuels Reduction Project 14.7 miles - Meadow Smith Project –	X	X
	Routine road maintenance will occur as needed on roads in the Project Area, separate from any road maintenance identified in this DEIS. Maintenance includes road grading, gate repair/replacement, cleaning ditches and culverts, brushing, and debris removal. Additional culverts are likely to be installed as needed.	X	X
Special Use Permits within the Cooney McKay Project Area	Section 22 T22N R17W – Power line; Section 34 T22N R17W – Power line; Section 22 T22NR17W – 2 FLPMA Road Permits; Section 15 T21N R16W – Outfitter SUP; Section 17 T21N R16W – FRTA Road Easement; Section 20 T21N R16W – FRTA Road Easement; Section 29 T21N R16W – FRTA Road Easement; Section 30 T21N R16W – FRTA Road Easement; Section 8 T21N R17W FRTA Road Easement; Section 8 T21N R17W – 2 FLPMA Road Permits; Section 14 T21N R17W – Power line; Section 15 T21N R17W – FRTA Road Easement; Section 22 T21N R17W – Power line; Section 25 T21N R17W – Park, Playground; Section 25 T21N R17W – Power line; Section 36 T21N R17W – Government-owned Building; Section 36 T21N R17W – Power line.		

TABLE 3-2.
PRESENT AND REASONABLY FORESEEABLE ACTIONS CONSIDERED IN THE CUMULATIVE EFFECTS ANALYSIS

Action	Description	Present	Reasonably Foreseeable
Land Acquisition	Proposed Acquisition of PCTC Lands in the Swan Valley		600 acres – T21NR17W Section 23 640 acres – T21NR17W Section 13 635 acres – T21NR16W Section 19 280 acres – T21NR17W Section 11 640 acres – T22NR17W Section 9 320 acres – T22NR17W Section 21 639 acres – T22NR17W Section 7 640 acres – T22NR18W Section 1
Private and Industrial lands			
PCTC Fuels Management, Wildfire Suppression, and Vegetation Management Activities	Vegetation Management within the Cooney McKay Project Area (2007)		Intermediate Harvest Skinny Dog 1 630 acres
	Vegetative Management within the Swan Valley	X	Timber Stand Improvement 350 acres Regeneration Harvest 374 acres Intermediate Harvest 830 acres
PCTC Road Management, Maintenance, and Closures within the Cooney McKay Project Area	Road maintenance associated with vegetation management activities	X	X
	Road Construction	X	1.5 miles
PCTC Land Sales	Sale of PCTC Lands within the Cooney McKay Project Area (2007)		600 acres – T21NR17W Section 23 640 acres – T21NR17W Section 13 635 acres – T21NR16W Section 19 280 acres – T21NR17W Section 11 320 acres – T22NR17W Section 21

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TABLE 3-2.
PRESENT AND REASONABLY FORESEEABLE ACTIONS CONSIDERED IN THE CUMULATIVE EFFECTS ANALYSIS

Action	Description	Present	Reasonably Foreseeable
PCTC Land Sales (cont'd)	PCTC Lands Sales within the Swan Valley		162 acres – T19NR16W Section 9 640 acres – T19NR17W Section 33 600 acres – T21NR17W Section 23 640 acres – T21NR17W Section 13 635 acres – T21NR16W Section 19 280 acres – T21NR17W Section 11 640 acres – T22NR17W Section 9 320 acres – T22NR17W Section 21 639 acres – T22NR17W Section 7 640 acres – T22NR18W Section 1
Private Land Development	Lake County	X	X
	Missoula County	No pending applications for subdivision development	
Montana State and Counties (Missoula & Lake)			
State of Montana Timber Harvest	Vegetation Management within the Cooney McKay Project Area	No Montana State lands lie within the Project Area	
	Vegetative Management within the Swan Valley		2064 acres - White Porcupine Multiple Timber Sale Sections 12, 13, 16, 22, 23, 24, 26, & 28 T23NR18W and Sections 22, 23, 24, 25, 26, 28, 34 & 36 T24NR18W, 240 acres – Winter Blowdown Salvage Sections 24, & 26 T23NR28W, and Sections 20, 30, 23 & 34 T23NR17W 1884 acres - Three Creeks FEIS Sections 1, 3, 4, 9, 10, 11, 14, 15, 16, 22, 25, 26 and 27 T24NR17W
Road Management/Maintenance	Road Construction within the Swan Valley		Three Creeks Timber Sale - 7.5 to 16 miles of new roads & 3 to 7 miles temporary roads
	Applications of BMPs within the Swan Valley		56 miles - Three Creeks Timber Sale

TABLE 3-2.
PRESENT AND REASONABLY FORESEEABLE ACTIONS CONSIDERED IN THE CUMULATIVE EFFECTS ANALYSIS

Action	Description	Present	Reasonably Foreseeable
All Forest Lands (NFS, Public & Timber Industry) Actions			
Dispersed Recreation within the Cooney McKay Project Area	The area offers a variety of motorized and non-motorized year-round recreation opportunities including, hiking, cross-country skiing, mountain biking, hunting, fishing, gathering forest products, driving for pleasure, and snowmobiling. A popular dispersed recreation site is located on Pony Creek. Smith Creek Pass Trail #29 and East Foothill Trail #192 are Forest Development Trails located within the Project Area. An Outfitter currently operates in the Squeezee, Lion, and Pony Creek drainages.	X	X

Forest Plan Management Direction

The Flathead Forest Plan sets management direction for this project area.

The Forest Plan provides forest-wide goals and objectives (pages II-1 through II-57). The Forest Plan also divides the Flathead National Forest into subunits called management areas (MAs). Each of these MAs has resource or activity goals and management standards (Forest Plan, pages III-1 through III-126). In keeping with Forest Service policy on multiple use, the Forest Plan established goals to strike a balance among different resources (Forest Plan, page II-5).

A brief overview of each of the MAs in this project area follows. More specific Forest Plan direction is discussed in each resource section later in this chapter.

TABLE 3-3.
MANAGEMENT AREA DESCRIPTIONS, EMPHASIS, AND MANAGEMENT AREA ACRES FOR THE COONEY MCKAY PROJECT

MA	Description	Management Emphasis	Total Acres
2	Unroaded lands suitable for dispersed recreation.	Manage to meet primitive ROS classification.	11,088
5	Roaded timberlands in areas of high scenic value, area along MT Highway 83 (Swan Valley Highway).	Maintain a pleasing, natural appearing landscape in which management activities, including timber management with roads, do not dominate.	145
9	Timberlands capable of providing white-tailed deer winter habitat.	Provide cover and forage areas suitable for white-tailed deer winter habitat.	6,306
10A	Administrative Site.	Timberlands adjacent to the Condon Work Center.	257
12	Riparian Areas consisting of aquatic, riparian, and portion of terrestrial ecosystems along most perennial streams, lakes, ponds, marshlands, bogs and some important seasonal flows.	Manage to enhance vegetation and wildlife diversity and maintain or enhance water quality and fisheries.	95

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TABLE 3-3.
MANAGEMENT AREA DESCRIPTIONS, EMPHASIS, AND MANAGEMENT AREA ACRES FOR THE
COONEY MCKAY PROJECT

MA	Description	Management Emphasis	Total Acres
13	Timberlands capable of providing mule deer and elk winter habitat.	Provide cover and forage suitable for mule deer and elk winter habitat.	3,263
15	Timberlands where timber management with roads is economical and feasible.	Timber production.	392
16	Unroaded timberlands. Use aerial logging systems.	Timber production, roadless logging methods.	254
	TOTAL NFS LANDS		21,800

Refer to Map 3-1 at the end of this chapter for a display of MAs in the analysis area.

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