
Appendix B
Past, Present, and Reasonably
Foreseeable Future Projects

Appendix B: Past, Present, and Reasonably Foreseeable Future Projects

This appendix lists projects and activities that are within one or more of the Cumulative Effects Analysis Areas for the resources listed below. The Analysis Area boundaries are depicted in figure B-1.

1. Vegetation
2. Wildlife
3. Botanical Resources
4. Watershed

This analysis relies on current environmental conditions as a proxy for the impacts of past actions—the reason is to understand the contribution of past actions to the cumulative effects of the Diamond Project proposed action and alternatives. The current conditions reflect the aggregate impact of prior human actions that have affected the environment and might contribute to cumulative effects.

This appendix is organized by Past Projects, Present and Ongoing Projects, and Future Projects. The projects and activities associated with specific resources are listed under each category. The sections below present past vegetation management projects on public and private lands; wild fires; watershed improvement projects; wildlife projects; herbicide treatments; and present, on-going, and reasonably foreseeable future projects. For each resource area, the scale and boundaries for the cumulative effects analysis vary—these are described in chapter 4.

PAST PROJECTS

Past Forest Service Vegetation Management Projects

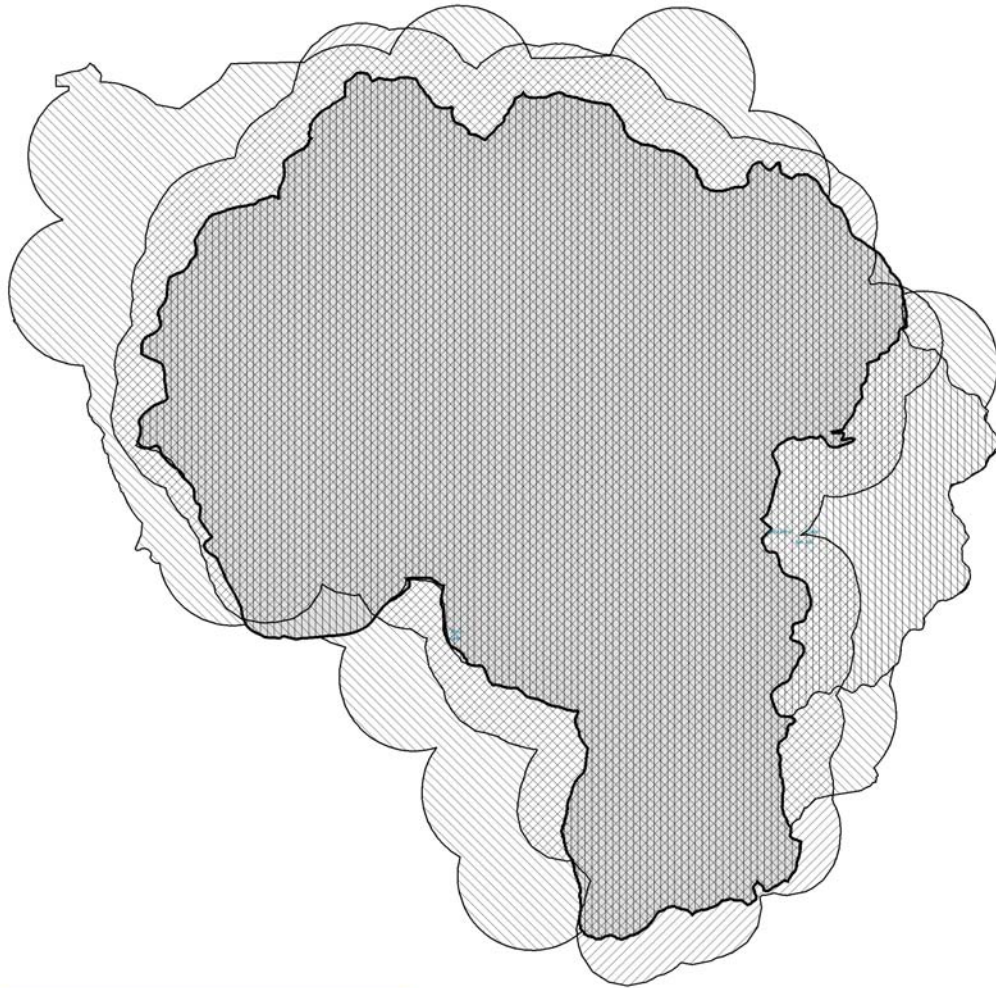
A total of 71 aspen stands, on approximately 194 acres, were treated between 1988 and 2005. Table B-1 lists the acres of past vegetation management actions on public lands, by activity.



Diamond DEIS



Analysis Area



	Hydrology Analysis Area	112,218 Acres
	Wildlife Analysis Area	159,102 Acres
	Botany Analysis Area	127,024 Acres
	Diamond Project Area	99,060 Acres

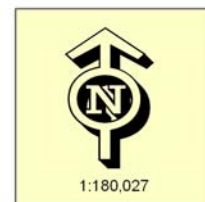
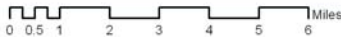


Figure B-1. Diamond Project Analysis Area boundaries.

Table B-1. Forest Service vegetation management activities between 1970 and 2005 that occurred in the four resource analysis areas (combined) for the Diamond Project.

Description of Forest Service Activity	1970	1974	1975	1976	1977	1978	1979	1980	1982	1983	1984	1985	1986	1987	1988
Activity Fuels Underburn															
Broadcast Burn										4	26				
Burning site preparation for planting											28	31	67	17	191
Commercial Thinning															
Group selection cut															
Other site preparation for planting				6						35	60	288	14	524	375
Overstory removal cut (from advanced regeneration)	78	58	116	523	114	44	29		356	850	201	316	279	125	59
Patch clearcut									43	134		57	52	49	54
Piling of Activity Fuels															
Precommercial thinning - individual or selected trees	21														
Precommercial thinning or cleaning															
Salvage						10	6		69			5		67	
Salvage cut (intermediate treatment, not regeneration)															
Sanitation Cut										75		226	168		26
Seed-tree seed cut										16					73
Shelterwood cut					194				19	57	22	8	92	141	56
Shelterwood final removal cut															62
Shelterwood preparation cut															
Single tree selection cut													164		43
Site preparation for natural regeneration												3			
Site preparation for planting														9	
Special Cut															6
Stand Clearcut		36			13	13	33	3	463	232	219	567	1,064	372	134
Stand clearcutting (w/ reserves)															10
Strip Clearcut														18	
Rearrangement of Activity Fuels															
Grand Total	99	94	116	529	321	67	68	3	950	1,403	556	1,501	1,900	1,322	1,088

Table B-1. Forest Service vegetation management activities between 1970 and 2005 that occurred in the four resource analysis areas (combined) for the Diamond Project (continued).

Description of Forest Service Activity	1989	1990	1991	1992	1994	1995	1996	1997	1998	2000	2001	2003	2005	Grand Total
Activity Fuels Underburn											1,808			1,808
Broadcast Burn														30
Burning site preparation for planting	582		35	31										982
Commercial Thinning							900	1,225	1,071	562		570	1,853	6,181
Group selection cut		23												23
Other site preparation for planting	283		5	143										1,733
Overstory removal cut (from advanced regeneration)	46	434	1,260	259		37								5,184
Patch clearcut	7													396
Piling of Activity Fuels												238		238
Precommercial thinning - individual or selected trees		35									1,607			1,662
Precommercial thinning or cleaning										32		241		273
Salvage		8	482		29									676
Salvage cut (intermediate treatment, not regeneration)												1,395		1,395
Sanitation Cut	193	566	325			25								1,604
Seed-tree seed cut	155	61												305
Shelterwood cut		51												640
Shelterwood final removal cut		35												97
Shelterwood preparation cut	73													73
Single tree selection cut		450	911	190	60	2,382								4,200
Site preparation for natural regeneration			8											11
Site preparation for planting	39	35		95										177
Special Cut										84	486			576
Stand Clearcut														3,149
Stand clearcutting (w/ reserves)		9												19
Strip Clearcut														18
Rearrangement of Activity Fuels								50						50
Grand Total	1,378	1,707	3,026	718	89	2,444	900	1,275	1,071	678	3,901	2,444	1,853	31,500

Past Vegetation Management Projects on Private Lands

Table B-2 lists the acres of past vegetation management actions on public lands, by activity.

Table B-2. Private harvest activities in watershed analysis area.

Activity	Acres of Activity by Treatment Year									
	1982	1993	1994	1996	1999	2000	2001	2002	2004	2005
Clearcut	14						16	5		
Commercial thin							56			
Modified selection		130								
Salvage				60						
Selection			1,146	1,510	1,115			1,555	6	3,570
Shelterwood removal		60			20	25		36	4	
Transition		16								

Past Wildfires

There have been approximately 15,000 plus acres of wildfires (see table B-3) in the Antelope Lake, Upper and Middle Lights Creek, Genesee Valley areas since 1918. Many of these areas were burned under high severity and replanted with conifer seedlings. Today, most of these areas are even-aged plantations.

Table B-3. Wildfires within the Diamond project area (Vegetation Analysis Area) from 1977 to the present.

HUC-6 Name	Year	Acres Burned	Cause
Middle Lights Creek	1977	16	Lightning
Genesee Valley	1981	1,406	Lightning
Middle Lights Creek	1986	30	Lightning
Antelope Lake	1996	96	Human
Middle Lights Creek	1996	59	Human
Antelope Lake	2001	3,502	Lightning
Total Acres (all causes)	—	5,109	—

Past Watershed Improvement Projects

2001	Post Stream Fire Burned Area Emergency Response (BAER) treatments — to reduce sedimentation from burned hill slopes. Treatments included contour falling, hydroseed application, and straw wattle placement.
1997	Fish passage improvement on Lights Creek at Moonlight Road (previous crossing blew out in 1997 flood).
1995	Lowe Flat log check dam for headcut stabilization.
1991	Wheeler Sheep Camp streamside enclosures and check dam installations.
Mid 1990s	Boulder Creek pond and plug

Hallett Meadow	1984 fish ladder 1985 riparian enclosure 1990s bank stabilization
Early 1990s	Bank stabilization on Indian Creek, several miles below the Dam. Root wads keyed into bank. Boulder Creek behind work center – check dams for headcut stabilization Willow Creek plug/pond activities.

Past Wildlife Projects

Table B-4. Wildlife projects within the Wildlife Analysis Area between 1982 and 2002.

Project Type	Year	Description
10 Wood Duck Nest Boxes	1984–2002	Around Antelope Lake
Five goose nesting islands	1988	Within Antelope Lake
Eight moat type islands	1988	Within Little Antelope Creek Meadow
Check dam installation	1991	Little Antelope Creek
Check dam repair	1997	Little Antelope Creek
Road closures for wildlife	1985	3 acres
Road closures for wildlife	1986	1 acre
Road closures for wildlife	1987	15 acres
Road closures for wildlife	1988	27 acres
Road closures for wildlife	1992	9 acres
Road closures for wildlife	1994	Seeding of 1.5 acres of closed road
Road closures for wildlife	1997	26 acres
Total road closures	1986–1997	81 acres of road closure
Exclosures	1985	Upper Indian Creek
Exclosures	1985	Hallet meadows
Exclosures	1987	Pachyderm aspen exclosure
Exclosures	1988	Two structures at Antelope Lake for WIFL
Exclosures	1988	Wheeler sheep camp
Exclosures	1990	Red Rock spring
Exclosures	1990	Beaver pond spring
Exclosures	1990	Red Light aspen
Vegetation management (excluding aspen)	1983	Cottonwood planting and protection (lower Indian Creek)
Vegetation management (excluding aspen)	1983	Browse way creation, Cairn Butte
Vegetation management (excluding aspen)	1983	Browse way creation, Taylor Lake
Vegetation management (excluding aspen)	1984	Lodgepole removal from lower Hallet meadow (4 acres)
Vegetation management (excluding aspen)	1985	Lodgepole cleanup from lower Hallet meadow (10 acres)
Vegetation management (excluding aspen)	1985	Willow plugs, Pierce Creek
Vegetation management	1987	Aspen/willow plant, cottonwood protection, lower Indian Creek
Waterhole development		Usually small waterholes created with backhoe or blasted with explosives below a spring: Total = 37.
Deer winter range burn	1985	Genesee Burn, 20 acres

Table B-4. Wildlife projects within the Wildlife Analysis Area between 1982 and 2002 (continued).

Project Type	Year	Description
Fish habitat improvement	1984	Fish ladder - Boulder Creek
Fish habitat improvement	1986	Log/Bank deflectors - Upper Indian Creek
Fish habitat improvement	1986	Rock rip rap Lower Indian Creek
Fish habitat improvement	1987	Rock rip rap Lower Indian Creek
Fish habitat improvement	1987	Jump pool development, Hungry Creek
Fish habitat improvement	1990	Rock rip rap Lower Indian Creek
Fish habitat improvement	1991	Two fish ladders on upper Indian Creek
Fish habitat improvement	1991	Ten instream log plunge structures in side tributary to upper Indian Creek
Fish habitat improvement	1991	Log/riprap structure on Lower Indian Creek

Past Herbicide Treatments

Table B-5. Pesticide use in pounds per acre in the four Diamond Project Analysis Areas combined.

	Pounds of Chemical Applied / Acres Treated				
	2000	2001	2002	2003	2004
Antelope Lake East Watershed					3 ^a
Antelope Lake Watershed					
Genesee Valley Watershed		21 ^b		960 ^a	297 ^a
Middle Lights Creek Watershed				0.6 ^b	
Upper Lights Creek Watershed					
Additional acres in the Wildlife Analysis Area	29.7 ^b	170.6 (30.7 ^b / 139.9 ^c)	1.48 ^b	48.8 (40.8 ^b / 8 ^c)	0.02 ^d
Totals	29.7	191.6	1.48	1009.4	300.02

Source: For tables B-5 and B-6: California Department of Pesticide Regulation (<http://www.cdpr.ca.gov/index.htm>) accessed on February 21, 2006.

Notes:

- a. Borax
- b. Clopyralid
- c. Hexazinone
- d. Fluazifop-P-Butyl

Table B-6. Acres treated with pesticides within the four Diamond Project Analysis Areas combined.

	Acres treated with Herbicide				
	2000	2001	2002	2003	2004
Antelope Lake East Watershed					3 ^a
Antelope Lake Watershed					
Genesee Valley Watershed		85 ^b		480 ^b	297 ^a
Middle Lights Creek Watershed				4 ^b	
Upper Lights Creek Watershed					
Additional acres in the Wildlife Analysis Area	180 ^b	379.8 (183.2 ^b / 196.6 ^c)	5 ^b	170 (165 ^b / 5 ^c)	500 ^d
Totals	180^b	464.8	5	654	800

Notes:

- a. Borax
- b. Clopyralid
- c. Hexazinone
- d. Fluazifop-P-Butyl

PRESENT AND ONGOING PROJECTS

Fuels Present Projects

All fuel projects within the Diamond Project Area fall into the reasonably foreseeable category.

Present and Ongoing Wildlife Projects

Diamond Mountain Limited Vehicle Access. The program has been in effect for 22 consecutive years that administratively closes roads to any motorized vehicles during the zone X-6A rifle deer season. This program is referred to as the “Diamond Mountain Limited Vehicle Access,” and the area is within the Diamond Project boundary. The closure was originally set up to respond to complaints about the volume of vehicles in the area during the deer-hunting season. The objective of removing vehicular traffic during the deer season is to curb excessive disturbance to deer and to improve the hunting experience for hunters. Partners in this closure effort include the Plumas County Fish and Game Commission, the California Department of Fish and Game, and the Plumas National Forest. Guidance for this program is found in the *Plumas Land and Resource Management Plan*, pages 4-287 and 4-292.

Present and Ongoing Herbicide Treatments

No herbicide treatments are currently being conducted on Forest Service lands in the Diamond Project Area. For an estimate of present use on private lands, refer to tables B-5 and B-6 above, which describe past pesticide application in the Project Area.

Present and Ongoing Recreation, Lands, and Minerals Projects

Recreation activities	Recreation use is very common in the Diamond Project Area; uses include camping, hiking, horseback riding, mountain biking, off-highway vehicle riding, boating, swimming, fishing, snowmobiling, cross country skiing, hunting, and rock hounding. Recreation opportunities range from semi-primitive non-motorized recreation to rural recreation (as defined by the Recreation Opportunity Spectrum). The Antelope Lake Recreation Area encompasses 2,300 acres and has three developed campgrounds, one picnic area, one boat ramp area, and one information center. This Recreation Area receives approximately 30,000 visitor days per year.
Recreation site maintenance	Developed recreation site maintenance requires hazard tree removal, pile burning, replacing signs, fire rings, tables, and older buildings.
Trail maintenance	There is approximately 17 miles of non-motorized trails within the project area. Annual trail maintenance work consists of clearing hazard trees, maintaining water bars or other erosion control devices, and maintaining and replacing signs. Work is typically accomplished by force account crews and volunteers.
Personal use woodcutting permits	<p>Woodcutting for personal use is permitted throughout the Plumas National Forest. The following is a list of the number of personal use permits sold on the Mt. Hough Ranger District for the past five years. It is estimated that 3 percent of the District's permit sales are within the Diamond Project boundaries.</p> <p>2001 – 998 permits for 2,572 cords 2002 – 938 permits for 2,401 cords 2003 – 819 permits for 2,154 cords 2004 – 758 permits for 2,400 cords 2005 – 942 permits for 2478 cords</p>
Commercial use woodcutting permits	<p>The following is a list of the number of commercial permits sold on the Mt. Hough Ranger District for the past five years. It is estimated that 3 percent of the District's commercial permit sales are within the Diamond Project boundaries.</p> <p>2001 – 17 permits for 160 cords 2002 – 15 permits for 135 cords 2003 – 15 permits for 90 cords 2004 – 19 permits for 95 cords 2005 – 66 permits for 322 cords</p>
Christmas tree permits	<p>It is estimated that 5 percent of the Mt. Hough Ranger District's permit sales are within the Diamond Project boundaries.</p> <p>2001 – 2,062 permits 2002 – 2,348 permits 2003 – 2,124 permits 2004 – 2,124 permits 2005 – 2,235 permits</p>

Abandoned mines	Approximately 11 abandoned mineshafts exist with the Diamond Project Area. Open shafts may pose a direct hazard to forest users, Forest Service personnel, and Forest Service contractors.
Active mining claims	There are approximately 224 active mining claims in the Project Area (75 placer claims and 140 lode claims). The Mt. Hough Ranger District currently administers five active plans of operation and eight notices of intent for those active claims.
Special uses	There are three special uses that occur in the Project Area. These include power lines, recreation events, and campground concession operations. These forest uses require annual maintenance for access, fire protection, and hazard tree removal.

Present and Ongoing Grazing Activities

Table B-7. Present and ongoing grazing activities in the Diamond Project Area

Allotment	Number of Acres	Status		
		Status/Kind	Number	Season
Antelope	24,872	Active/Cattle	250	6/14–8/31
Lone Rock	25,025	Active/Cattle	80	6/1–9/15
Antelope Lake	5,043	Active/Cattle	150	9/3–10/4
Taylor Lake	26,718	Vacant/Sheep	—	—
Hungry Creek	17,774	Vacant/Sheep	—	—
Jenkins	27,366	Active/Cattle	600	8/1–9/1
Clarks Creek	16,635	Active/Cattle	163	06-09/15
Lights Creek	29,721	Active/Cattle	10	6/1–9/1

FUTURE PROJECTS

Future Fuels and Vegetation Management Projects within the Diamond Project Area

Hungry Fuels Reduction Project	2,125 acres of grapple piling and/or mastication to begin in 2006. Mastication acres include existing plantations. 265 acres of underburning to be initiated in 2006 and completed over 3–5 years as weather, burn conditions, and resource levels allow.
Greenflat Salvage and Underburn Project	1,000 acres of underburning to be initiated in 2006 and completed over 3–5 years as weather, burn conditions, and resource levels allow.
North Antelope DFPZ	1,000 acres of underburning to be initiated in 2006 and completed over 3–5 years as weather, burn conditions, and resource levels allow. This is a maintenance burn of the North Antelope DFPZ.
Lucky “S” Salvage and Underburn Project-	520 acres of underburning to be initiated in 2006 and completed over 3–5 years as weather, burn conditions, and resource levels allow.

Campgrounds

Fuels and fire personnel may work with recreation staff to develop a hazard tree and ladder fuel removal program in campgrounds. This will likely involve using fire crews to fall and remove (chip or pile burn) suppressed trees and snags from all developed campgrounds and possibly other high use sites on an “as needed” basis.

Future HFQLG Projects

Table B-8. Future HFQLG Projects that are outside the Diamond Project Area but within one or more of the Diamond Resource Analysis Areas.

Project	Year Planned	Analysis Area that Includes HFQLG Project	
		Wildlife Analysis Area	Botany Analysis Area
Keddie Project on the Mt. Hough Ranger District	2007	X	—
Genesee Project	2008	X	—
Antelope	2009	X	—
Southside DFPZ on the Eagle Lake Ranger District (approximately 245 acres), Lassen National Forest	2006	X	—
Keddie DFPZ on the Eagle Lake Ranger District (approximately 1,300 acres), Lassen National Forest	—	X	X
Susan River DFPZ on the Eagle Lake District (approximately 1,200 acres), Lassen National Forest	—	X	X

Maintenance of DFPZ Fuel Projects within the Diamond Project Area

A reasonable and foreseeable activity in the Diamond Project Area would be maintenance fuel reduction treatments within DFPZs at some time in the future. These activities would maintain low surface fuel loadings and keep fire intensities and rates of spread at low levels. This discussion incorporates, by reference, the *Herger-Feinstein Quincy Library Group Forest Recovery Act* (HFQLG Act) Final Environmental Impact Statement (EIS) and Final Supplemental EIS. These surface fuel reduction maintenance activities would include, but not be limited to, prescribed fire, mastication, and selective piling of residual slash.

Based on the HFQLG Act Final Supplemental EIS, the Diamond Project Interdisciplinary Team (ID Team) members can expect the likely hazardous fuels maintenance schedule as described in following paragraphs.

Maintenance fuels reduction treatments are not expected for aspen, montane chaparral, montane hardwood, and montane riparian or wet meadow areas. For the remaining forested stands, the Forest Service would assess the need for maintenance treatments no later than four years after the completion of the initial mechanical and fire activities, as proposed in the Diamond Project EIS. It is expected, though, that maintenance activities would take place as described in the HFQLG Act Final Supplemental EIS, and further refined by on-site information available at the time of maintenance would be proposed. The following describes likely maintenance treatments in the different stand types within the Project Area. Specific decisions about maintenance for a particular DFPZ (timing of entry and treatment method) would only be made at the time DFPZ maintenance is actually necessary (HFQLG Final Supplemental EIS, page 3).

A majority of the Project Area consists of Sierra mixed conifer stands. These stands are heavy with ponderosa pine and a lesser component of white fir. The initial follow-up maintenance treatment would occur about 10 years after completion of the proposed actions in this document. If underburned, there would be a much less amount of surface fuels, and most of the stumps and larger material would have been consumed by the original activities. Therefore, fire would burn at less intensity, and residence time of combustion would be less. The rate of spread of the flame front would likely be similar to what exists there now because pine needles and small fuels would be the main drivers of fire spread and would be the main fuels that would accumulate over time. With lesser intensity, scorch heights would be reduced during subsequent maintenance activities; therefore, less mortality of leave trees would be expected.

There are approximately 6,800 acres of ponderosa pine stands in the Project Area. Although the fire return interval for pine is more frequent than for mixed conifer stands, the frequency and timing of subsequent maintenance fuel treatments would be similar. Even if the first maintenance treatment occurs 10 years after the initial surface and ladder fuel reduction treatments, along with increasing the spacing of the leave trees, only about one fire return interval would likely have been missed. This would still allow for much less intensity, thus more moderated fire effects during the maintenance burning.

The other less extensive stands in the Project Area would also respond to the 10-year maintenance interval in a similar way. In red fir stands, mastication of the regenerating brush would be a more likely activity rather than by using prescribed fire.

Should mastication be chosen as the preferred maintenance treatment in any of the various stands, there would likely be less material that would need treatment, and any brush regeneration would still be a low level, with little decadent material present.

Future Herbicide Treatments

Plumas National Forest Integrated Noxious Weed Control Program. The Plumas National Forest, in cooperation with Plumas and Sierra Counties Department of Agriculture, is proposing to control noxious weeds on the Plumas National Forest for 10 years through an integrated management approach. The methods proposed for noxious weed control include chemical, biological, mechanical, and cultural treatments, as well as prevention and monitoring activities.

There are four noxious weed locations, in the four Analysis Areas, that are proposed for treatment under the Plumas National Forest Integrated Noxious Weed Control Program. These include three Canada thistle (*Cirsium arvense*) locations that occupy approximately 0.02 acre, and the one spotted knapweed (*Centaurea maculosa*) infestation that occupies approximately 4 square feet. The herbicides glyphosate and clopyralid are proposed for use on all four infestations.

Future Grazing Activities

A forestwide Range NEPA (*National Environmental Policy Act*) Strategy and Implementation Plan was signed by the Forest Supervisor on December 16, 2005. This plan will analyze and document range NEPA projects on all 65 allotments on the Plumas National Forest and is currently posted on the Plumas National Forest Schedule of Proposed Actions (the “SOPA”).

Future Grazing Activities

Table B-9. Future recreation, lands, and minerals projects.

Year	Future Activities	Activity Description
2006–2008	OHV Route Designation	The USDA Forest Service is currently undergoing an off-highway vehicle (OHV) route designation process. By 2008, the Plumas National Forest will have established a designated OHV route system based on existing non-system and system trails on the Forest. It is likely that a number of non-system routes in the Diamond Project Area will be decommissioned or closed.
2006–2010	Abandoned mine closures	Closure of mineshafts using a constructed foam “plug” or other method may be implemented at two locations in the Diamond Project Area as funding allows. As a minimum safety precaution, fencing and signing of mineshafts will likely occur at all 11 abandoned mines.
2007–2010	Land conveyance	In order to sustain funding under the <i>Secure Rural Schools and Community Self-Determination Act</i> , the Forest Service may authorize the conveyance of parcels of forest land that are isolated or inefficient to manage.
2006–2009	Wind energy testing sites and meteorological towers	Twelve wind energy sites and meteorological towers will be constructed in the Diamond Project Area for wind energy testing.