Appendix A

Past, Present and Reasonably Foreseeable Future Activities Within the Cumulative Effects Analysis Area

Appendix A – Past, Present and Reasonably Foreseeable Future Activities Within the Cumulative Effects Analysis Area

Cumulative effects are the impact on the environment which results from the incremental impact of any action (in the case of this analysis, that action consists of the Toolbox Fire Recovery Project) when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. In other words, cumulative effects are the **total** effect of direct and indirect effects of the action plus past, present, and reasonably foreseeable future actions on a given resource. For most resources the area of cumulative effects analysis for this project is defined by the eight hydrologic subwatersheds in which the project occurs (listed below), extended beyond the project boundary to include the entirety of the eight subwatersheds, regardless of ownership. The cumulative effects analysis area encompasses about 152,000 acres.

Silver Creek Watershed –
(The following subwatersheds)

- Middle Silver Creek
- West Fork Silver Creek
- Upper Silver Creek
- Thompson Reservoir
- Benny Creek

Silver Lake Watershed –
(The following subwatersheds)

- Upper Duncan Creek
- East Duncan Creek
- Lower Duncan Creek

This Appendix provides a comprehensive tabular display of activities and natural events that already have occurred, are currently occurring, or are likely to occur in the eight-subwatershed area of potential cumulative effect. For most resources this 152,000-acre area is sufficient because any potential cumulative effect involving a combination of the direct and indirect effects of the Toolbox Fire Recovery project, added to the activities displayed in the following tables, would not be of an intensity or duration to be significant or more likely to even be discernable.

The mere display of the activities in the following tables does not amount to a disclosure of cumulative effects. These tabular displays cannot stand alone. They are supported with cumulative effects analysis for each resource area in the effects discussion of Chapter 3. In instances where the eight-subwatershed area does not provide a sufficient area of consideration for cumulative effects, additional area has been included in that Chapter 3 analysis. For example, wildlife species may have ranges that extend beyond the eight-subwatershed area. Specifically, mule deer have a herd range that in includes portions of the Summer Lake watershed. During 2002 a large fire (Winter) occurred in that watershed, adjacent to the Toolbox Fire Complex. For the consideration of cumulative effects on mule deer, both the Winter Fire and planned fire recovery project activity is included in the cumulative effects analysis in Chapter 3.

This Appendix contains the following tables:

TOOLBOX FIRE RECOVERY PROJECT – PAST AND PRESENT ACTIVITIES (through 2003)
Table A-8 - LIVESTOCK GRAZING ALLOTMENTS – National Forest
LIVESTOCK GRAZING ALLOTMENTS - BLM and Private
Table A-9 - WILDLIFE HABITAT AND WATERSHED IMPROVEMENT PROJECTS – All Ownerships

TOOLBOX FIRE RECOVERY PROJECT – PAST, PRESENT AND FUTURE ACTIVITIES
Table A-10 - DIVERSIONS, DAMS, RESERVOIRS AND IMPOUNDMENTS – All Ownerships
Table A-11 - POWERLINES AND COMMUNICATIONS FACILITIES UNDER PERMIT– All Ownerships
Table A-12 - PERSONAL USE FIREWOOD – National Forest
Table A-13 - TIMBER MANAGEMENT– Private Lands

TOOLBOX FIRE RECOVERY PROJECT – FUTURE ACTIVITIES (2003 -)
Table A-14 - NOXIOUS WEED TREATMENT – All Ownerships
Table A-15 - ALL ACTIVITIES - Bureau of Land Management
Table A-16 - ALL OTHER ACTIVITIES - National Forest (Other than Toolbox Project)

TOOLBOX FIRE RECOVERY PROJECT – FUTURE ACTIVITIES (2004 -)
Table A-17 - LIVESTOCK GRAZING ALLOTMENTS – All Ownerships

Source documentation that was used to prepare the following tables is displayed as Appendix A Bibliography at the end of this section. All of this source documentation is available in the Toolbox Fire Recovery Analysis File.

TOOLBOX FIRE RECOVERY PROJECT – PAST ACTIVITIES (through 2002)

Table A-1 - FIRE HISTORY and SUPPRESSION – All Ownerships

Past Activity or Event	Ownership	**Subwatershed** (or other location designation)							
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Wildfire 1948 -2001	All	1620 acres 78 fires; 97% of the acres were from lightning caused fire Largest fire - 1440 acres	2320 acres 67 fires; 98% of the acres were from lightning caused fire Largest fire - 2110 acres	3820 acres 155 fires; 88% of the acres were from human caused fire Largest fire - 3240 acres	15 acres 35 fires; 71% of the acres were from human caused fire	530 acres 106 fires; 97% of the acres were from lightning caused fire Largest fire - 430 acres	44 acres 38 fires; 64% of the acres were from human caused fire	9 acres 45 fires; 77% of the acres were from lightning caused fire	130 acres 76 fires; 95% of the acres were from lightning caused fire Largest fire - 120 acres
Wildfire 2002 (Toolbox Complex – lightning caused)	All	9717 acres	5459 acres	8212 acres	1649 acres	12704 acres	13849 acres	11130 acres	17639 acres
2002 Dozer Fireline	All	24 Miles	27 Miles	30 Miles	19 Miles	31 Miles	34 Miles	9 Miles	29 Miles
2002 Hand Fireline	All	1 Mile	1 Mile	1 Mile					
2002 Retardant Drops	All	Approximately 102,000 gallons of retardant were used during suppression. This would be considered a relatively small amount for a fire of this size. Most of the time the fire did not have a high enough priority to receive large amounts of retardant. The primary area that received retardant was the Dead Indian Mountain communications site (Lower Duncan Creek subwatershed). Retardant was also used within the Middle Silver Creek subwatershed and the Thompson subwatershed.							
2002 Firing and Burnout Operations	All	Both "Firing Operations" and "Burnout Operations" occurred on the Toolbox Complex. Firing (or backfiring) is a tactic associated with indirect attack, intentionally setting fire to fuels inside the control line, most often used to contain a rapidly spreading fire. Firing operations occurred on July 22, 25 and 27, mostly in the Lower Duncan Creek Subshed. This burning was at variable intensities ranging from hot burning with torching out occurring, to much cooler burns. Burning out is setting fire to fuels inside the control line to strengthen the line. Burning out is almost always done as a part of line construction. A primary focus of burnout operations was also within the Lower Duncan Creek Subshed.							
2002 Snag Felling during Suppression	All	During any suppression or mop up operation, trees are felled for safety reasons, or in order to extinguish a tree that has fire higher than normal suppression actions can manage. On the Toolbox Complex Fires, it is estimated that 300 to 400 snags, scattered throughout the entire fire area, were felled for these reasons.							

Wildfire History is for the period 1948 to 2002. See Toolbox Fire Recovery Project Analysis File for more detailed source information.

TOOLBOX FIRE RECOVERY PROJECT - PAST ACTIVITIES and Events (through 2002)

Table A-2 - COMPOSITE OF VEGETATION TREATMENTS and PAST EVENTS - National Forest Subwatershed

Sequence of Activity or Events that Produced Stand Condition (pre-2002 Wildfires)	W. FORK SILVER CREEK	UPPER SILVER CREEK	THOMPSON RESERVOIR	MIDDLE SILVER CREEK	BENNY CREEK	LOWER DUNCAN CREEK	EAST DUNCAN CREEK	UPPER DUNCAN CREEK	Total Acres
Intermediate Harvest		159	250	1	414	18	177	166	1184
Intermediate Harvest, past wildfire			5		0				5
Intermediate Harvest, pretreatment			9						9
Intermediate Harvest, underburn		116	202		14			85	418
Intermediate Harvest, underburn, past wildfire			1						1
Intermediate Harvest, underburn, pretreatment		11	9						20
Intermediate Harvest, twice Underburned		81							81
Intermediate Harvest, thinning	29	114	88	156	155	25	64	171	802
Intermediate Harvest, thinning, pretreatment			10	12					22
Intermediate Harvest, thinning, underburn	170	63						53	286
Intermediate Harvest, thinning, twice underburned	46	1							46
Intermediate Harvest, planting			1		10				11
Past wildfire, Intermediate Harvest, planting			1		5				6
Past wildfire, Intermediate Harvest, planting, mowing			23		5				29
Intermediate Harvest, underburning, planting					11				11
Intermediate Harvest, planting, thinning	0				91				91
Even-age Regen Harvest	121	81	159	173	983		100	802	2419
Even-age Regen Harvest, past wildfire		3	21						24
Even-age Regen Harvest, Underburning	99	198	32	61	259				649
Even-age Regen Harvest, underburning, past wildfire		17							17
Even-age Regen Harvest, underburning, pretreatment			10	10					21
Even-age Regen Harvest, twice underburned	19	0	1						19
Even-age Regen Harvest, Thinning	1310	580	1429	354	719	244	267	939	5842
Even-age Regen Harvest, Thinning, past wild fire	7	27	61						94
Even-age Regen Harvest, Thinning, pretreatment	82		87	25					193
Even-age Regen Harvest, Thinning, underburning	253	905	166	85	130		23	22	1584
Even-age Regen Harvest, Thinning, underburning, past wildfire		65							65
Even-age Regen Harvest, Thinning, pretreatment, underburning		53	1	5					60
Even-age Regen Harvest, Thinning, twice underburned	0	350	22						372

TOOLBOX FIRE RECOVERY PROJECT - PAST ACTIVITIES and Events (through 2002)

Table A-2 - COMPOSITE OF VEGETATION TREATMENTS and PAST EVENTS - National Forest

Sequence of Activity or Events that Produced Stand Condition (pre-2002 Wildfires)	Subwatershed								
	W. FORK SILVER CREEK	UPPER SILVER CREEK	THOMPSON RESERVOIR	MIDDLE SILVER CREEK	BENNY CREEK	LOWER DUNCAN CREEK	EAST DUNCAN CREEK	UPPER DUNCAN CREEK	Total Acres
Even-age Regen Harvest, Three times underburned		8							8
Even-age Regen Harvest, planted	19	8	300	522	65	35	94	102	1144
Even-age Regen Harvest, planted, past wildfire	19		8		16				44
Even-age Regen Harvest, planted, pretreatment	0		1	17					18
Even-age Regen Harvest, planted, pretreatment, past wildfire	1								1
Even-age Regen Harvest, Planted, Underburned		64	16	3	79				162
Even-age Regen Harvest, planted, underburned, pretreatment		53	2	1					55
Even-age Regen Harvest, planted, twice underburned		36							36
Even-age Regen Harvest, pretreatment, twice underburned		3							3
Even-age Regen Harvest, planted, thinned	892	78	1630	120	215	150	74	242	3401
Even-age Regen Harvest, planted, thinned, past wildfire	390	442	286		7				1124
Even-age Regen Harvest, planted, thinned, pretreatment	11		5	2					18
Even-age Regen Harvest, planting, thinning, underburning	194	122	21	63	0		37		438
Even-age Regen Harvest, plant, thin, underburn, pretreatment		4		1					5
Even-age Regen Harvest, planting, thinning, twice underburned	24	21							44
Even-age Regen Harvest, plant, thin, twice underburned, pretreat		25							25
Even-age Regen Harvest, plant, thin, three times underburned		18							18
Twice Regen Harvested, Thinning		25						26	51
Twice Regen Harvested, Thinning, underburned		136							136
Twice Regen Harvested, Thinning, underburned, past wildfire		15							15
Twice Regen Harvested, Thinning, twice underburned		2							2
Twice Regen Harvested, Planting, Thinning, past wildfire	16								16
Even-age Regen Harvest, Salvage Harvest, thinning		68							68
Even-age Regen Harvest, Salvage Harvest, thin, past wildfire	19								19
Even-age Regen Harvest, Salvage Harvest, thin, underburning		49							49
Even-age Regen Harvest, Salv Harvest, thin, twice underburned		63							63
Even-age Regen Harvest, Salvage Harvest, Planting		10							10
Even-age Regen Harvest, Salv Harvest, plant, twice underburned		2							2
Even-age Regen Harvest, Salvage Harvest, Planting, thinning,	1								1
Even-age Regen Harvest, Salv Harvest, plant, thin, past wildfire	316								316

TOOLBOX FIRE RECOVERY PROJECT - PAST ACTIVITIES and Events (through 2002)

Table A-2 - COMPOSITE OF VEGETATION TREATMENTS and PAST EVENTS - National Forest

Sequence of Activity or Events that Produced Stand Condition (pre-2002 Wildfires)	Subwatershed								
	W. FORK SILVER CREEK	UPPER SILVER CREEK	THOMPSON RESERVOIR	MIDDLE SILVER CREEK	BENNY CREEK	LOWER DUNCAN CREEK	EAST DUNCAN CREEK	UPPER DUNCAN CREEK	Total Acres
Uneven-age Regen Harvest		33	83						117
Uneven-age Regen Harvest, underburning		55	9						64
Uneven-age Regen Harvest, underburning, pretreatment		7							7
Uneven-age Regen Harvest, twice underburned		38							38
Uneven-age Regen Harvest, thinning	78	41	18	21		93	513	521	1285
Uneven-age Regen Harvest, thinning, past wildfire	21	20							40
Uneven-age Regen Harvest, thinning, pretreatment	12								12
Uneven-age Regen Harvest, thinning, underburning		175		2		31	241	133	583
Uneven-age Regen Harvest, Planting			3		0		1	10	14
Uneven-age Regen Harvest, Planting, past wildfire	36								36
Uneven-age Regen Harvest, Planting, underburning			156		8		13		177
Uneven-age Regen Harvest, Planting, twice underburned			219		9				228
Uneven-age Regen Harvest, Planting, three times underburned			49						49
Uneven-age Regen Harvest, Planting, thinning	16								16
Uneven-age Regen Harvest, Planting, thinning, wildfire		67							67
Uneven-age Regen Harvest, Planting, thinning, pretreatment	4								4
Salvage Harvest, past wildfire			11						11
Salvage Harvest, underburning		7							7
Salvage Harvest, twice underburned		5							5
Salvage Harvest, thinning, past wildfire			42						42
Salvage Harvest, thinning, underburned	61	1							62
Salvage Harvest, thinning, twice underburned	1	8							9
Salvage Harvest, Planting		0	2						2
Salvage Harvest, Planting, past wildfire	15	212	118						344
Salvage Harvest, Planting, thinning			10		4				13
Salvage Harvest, Planting, thinning, past wildfire			1728		0				1728
Salvage Harvest, Planting, thinning, mowing			0		2				2
Salvage Harvest, Planting, thinning, past wildfire, mowing			56		34				90
Salvage Harvest, Planting, thinning, pretreatment, past wildfire			3						3
Salvage Harvest, Planting, thinning, underburning			1		6				7

TOOLBOX FIRE RECOVERY PROJECT - PAST ACTIVITIES and Events (through 2002)

Table A-2 - COMPOSITE OF VEGETATION TREATMENTS and PAST EVENTS - National Forest Subwatershed

Sequence of Activity or Events that Produced Stand Condition (pre-2002 Wildfires)	W. FORK SILVER CREEK	UPPER SILVER CREEK	THOMPSON RESERVOIR	MIDDLE SILVER CREEK	BENNY CREEK	LOWER DUNCAN CREEK	EAST DUNCAN CREEK	UPPER DUNCAN CREEK	Total Acres
Salvage Harvest, Planting, thinning, underburning, past wildfire			0		2				3
Mowing			1		4				5
Mowing, past wildfire			72		83				155
Pretreatment	851	24	342	363					1579
Pretreatment, past wildfire	16	2	2						20
Planting, past wildfire	15	7							21
Planting, thinning	101				19				120
Planting, thinning, past wildfire	31		86						117
Thinning	97		97	82	28				304
Thinning, past wildfire			16		3				19
Thinning, mowing					5				5
Thinning, mowing, past wildfire			134		226				360
Thinning, pretreatment	16			1					17
Thinning, underburning	44	18		6	21				89
Underburning	2842	3033	1386	685	2995	3	2	482	11427
Underburning, past wildfire		53	3		4				61
Pretreatment, underburning		653	74	81					809
Twice underburned	175	1077	1141		15				2408
Pretreatment, twice underburned		148							148
Three times underburned		176	32						209
Past wildfire	539	1181	767		52				2539
No activity or events	11063	4003	27189	7433	20072	6565	9774	18334	104433
Grand Total (Acres)	**20069**	**15119**	**38708**	**10287**	**26772**	**7163**	**11382**	**22087**	**151586**
Acres which have received treatment (or experienced past wildfire)	9006	11117	11519	2853	6700	598	1607	3753	47153

TOOLBOX FIRE RECOVERY PROJECT - PAST ACTIVITIES and Events (through 2002)

Table A-2 - COMPOSITE OF VEGETATION TREATMENTS and PAST EVENTS - National Forest Subwatershed

Sequence of Activity or Events that Produced Stand Condition (pre-2002 Wildfires)	W. FORK SILVER CREEK	UPPER SILVER CREEK	THOMPSON RESERVOIR	MIDDLE SILVER CREEK	BENNY CREEK	LOWER DUNCAN CREEK	EAST DUNCAN CREEK	UPPER DUNCAN CREEK	Total Acres

This table was used during analysis as an intermediate step in developing a comprehensive description of current vegetative condition. It represents activities and events on National Forest lands within the total area of the subwatersheds that comprise the area of consideration for cumulative effects for all resource areas. It represents activities in the GIS corporate database going back to the early 1970s. In some cases, entries in other tables in Appendix A represent the same events or activities. For example, the Fire History table and the Fuels Reduction table both include some of the events and activities that are a part of some of the sequences depicted above. What are "separate" or unique in the above information are the Harvest, Planting and Thinning activities that are a part of the sequences listed.

TOOLBOX FIRE RECOVERY PROJECT – PAST ACTIVITIES (through 2002)

Table A-3 - FUELS REDUCTION PROJECTS – All Ownerships

Past Activity	Ownership	**Subwatershed** (or other location designation)							
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan	East Duncan	Upper Duncan Creek
Under-burning (Prescribed Fire)	National Forest	330 ac '85-89 3500 ac '95-99	1530 ac '85-89 2250 ac '90-94 6920 ac '95-99	1500 ac '85-89 270 ac '90-94 1860 ac '95-99 350 ac '00-	280 ac '80-84 650 ac '85-89	1360 ac '90-94 1850 ac '95-99 950 ac '00-			250 ac '95-99
Pretreatment	National Forest	100 ac Pre '90-94 950 ac '00-	650 ac '95-99	410 ac '95-99 160 ac '00-	780 ac '00-				
Mowing	National Forest			285 ac '95-99		360 ac '95-99			
AFT/Piles	National Forest	420 Piles '90-94 60 Piles '95-99	4 Piles '90-94 17 Piles '95-99 7 Piles '00	420 Piles '90-94 50 Piles '95-99	2 Piles '90-94 2 Piles '95-99	70 Piles '90-94 60 Piles '00-		30 Piles '90-94 10 Piles '00-	220 Piles '90-94
AFT/Burn	National Forest	240 ac '90-94 40 ac '95-99	50 ac '90-94 100 ac '00-	600 ac '90-94			30 ac '95-99	340 ac '95-99	560 ac '95-99

Crushing	National Forest	230 ac '95-99	190 ac '95-99	150 ac '95-99					

Note: Contacts with both the BLM and private landowners within the area of cumulative effects analysis revealed no past fuels reduction activities.

See Toolbox Fire Recovery Project Analysis File for more detailed source information, such as project names and exact year of activities.

ac = Acres
Pretreatment = Small diameter tree thinning in preparation for underburning
Mowing = Cutting with a mechanical mower to reduce the fuels profile
AFT/Piles – post-harvest Activities Fuels Treatment by burning landing piles (or other slash piles). Piles range from 1/100 acre to 1/4 acre. Typical size 1/8 Ac.
AFT/Burn – post-harvest Activities Fuels Treatment by "jackpot" burning, underburning in harvest units or broadcast burning
Crushing – Slash crushing (treating by lowering the fuels profile)

TOOLBOX FIRE RECOVERY PROJECT – PAST ACTIVITIES (through 2002)

Table A-4 - NOXIOUS WEED TREATMENT – All Ownerships

Weed Species	Ownership	Subwatershed (or other location designation)								
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir		Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
		<<<<<<<<<<<< Silver Fire >>>>>>>>>>>>>				<<<<<<<<<<<<< Toolbox Fire >>>>>>>>>>>>>				
		Year of Discovery	Size When Discovered	Treatment Methods	Current Size	Year of Site Discovery	Size When Discovered	Treatment Methods		Current Size
Centaurea maculosa spotted knapweed	National Forest	1995 1995 1996	1 ac 0.1 ac 1 ac	Hand pulling Hand pulling Hand pulling	1 ac 0.1 ac 1 ac (scattered)					
Hypericum perforatum St. John's wort	National Forest	1997	1.6 ac	Chemical (2001)	0.1 ac					
Carduus nutans musk thistle	National Forest	1995 1997 2002	5 ac 3 ac 0.1 ac 0.1 ac	Hand pulling Hand pulling Hand pulling Hand pulling	0.1 ac 3 ac (scattered) 0.1 ac 0.1 ac	1995 1995 1995 1995 1995 2002	1.9 ac 4.7 ac 0.1 ac 2.5 ac 2.2 ac 0.3 ac	Handpull; then Chemical ('01-'02) Hand pulling Handpull; then Chemical ('01-'02) Handpull; then Chemical ('01-'02) Handpull; then Chemical ('01-'02) Hand pulling		0.1 ac 0.1 ac 0.1 ac 1 ac 2.2 ac 0.3 ac
Cirsium arvense Canada thistle	National Forest					1995 1995 2002	2.4 ac 1.9 ac 0.1 ac	Chemical ('01-'02) Chemical ('01-'02) Chemical (2002)		Scattered 0.1 ac 0.1 ac
Canada thistle	BLM	Several sites; currently decreasing in size due to treatments, including chemical.								
Taeniatherum caput-medusae) medusahead rye	BLM	Numerous sites; a few are currently decreasing in size due to treatments, including chemical; others have not been treated and are increasing.								
Salvia aethiopis Mediterranean sage	BLM	Few sites within fire boundary; more numerous in areas adjacent to the fire. No past treatment.								
Other	BLM	Cheatgrass (*Bromus tectorum*), an aggressive nonnative species, is also present on most of the lands within the fire boundary. No past treatment.								
All noxious weeds and other undesirable non-natives	Private (besides Industrial Forest)	Minor scale weed problems. A known Scotch broom site was treated in 2000. Canada thistle sites are known including ones 5-10 and 20 acres in size. Medusahead rye is known adjacent to BLM. Exact acreage is unknown. Cheatgrass is also known. Private landowners are highly aware of the problems that noxious weeds can create and are actively attempting to eliminate them on their lands, using all means legally available.								
All noxious weeds and other undesirable non-natives	Private (Industrial Forest)	Minimal number of known noxious weed sites and acreage affected. No known past treatment.								

TOOLBOX FIRE RECOVERY PROJECT – PAST ACTIVITIES (through 2002)

Table A-5 - RECREATION FACILITY DEVELOPMENT – All Ownerships

Past Activity	Ownership	**Subwatershed** (or other location designation)					
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower, East. Upper Duncan
Bunyard Crossing	National Forest		Developed dispersed site with tables and toilets – 1960				
Thompson Resv. CG	National Forest			Initial development with toilets, tables, boat ramp – 1960; Campsites added, new toilets, improved boat ramp – '95 to '00			
Silver Creek Marsh CG	National Forest	Initial development w toilets and tables – 1961 Enlarged; added trailhead w/horse facilities – '92					
East Bay CG	National Forest			Initial development: tent camping and boat ramp – 1963; Improved access, increased sites, paved roads and boat launch ramp - 1991			
Fremont NRT	National Forest	Construction of multiple-use trail with hiker/equestrian/mtn. bike emphasis - traverses entire analysis area– 1990-99. 14 Mi. in Toolbox Fire Portion. 11 Mi. in Silver Fire Portion					
Fremont Point Cabin	National Forest					Remodel and new construction to develop year-round rental – 1993 Destroyed by fire - 2002	
Farm Well CG and Trailhead	National Forest				Remodel and new construction of NRT Trailhead w corrals, campsites and well – 1993		
Pole Butte Snowpark and Trail System	National Forest			Route marking on existing rds; Construction of temp. parking area for winter access to Fremont Pt and Winter Rim – ' 94 Permanent parking – '00		Route marking on existing roads – 1994	
Duncan Reserv CG	BLM				Rustic Recreation Site Developed in 1973		

See Toolbox Fire Recovery Project Analysis File for more detailed source information – such as project names and exact year of activities.
CG = Campground

NRT = National Recreation Trail

TOOLBOX FIRE RECOVERY PROJECT – PAST ACTIVITIES (through 2002)

Table A-6 - ROAD SYSTEM DEVELOPMENT– All Ownerships

Type of Facility	Ownership	Subwatershed (or other location designation)							
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Classified Road - Miles	**National Forest (NF)**	116	78	213	45	91	17	35	85
Classified Road - Miles	**All non -NF**	12	12	41	68	46	62	41	48
Classified Rd – Density (Mi/Sq Mi)*	**National Forest**	3.76	3.71	4.31	3.40	3.25	2.73	4.20	4.10
Classified Rd – Density (Mi/Sq Mi)*	**All non -NF**	1.89	2.73	2.74	1.44	3.32	1.90	4.19	3.50
TOTAL Classified Road Density	**ALL**	3.43	3.54	3.95	1.86	3.27	2.03	4.19	3.87
Unclassified Rd – Density (Mi/Sq Mi)*	**National Forest**	0.9 Mi/Sq Mi							
Unclassified Rd – Density (Mi/Sq Mi)*	**Non-NF (Industrial Forest Lands)**	2.3 Mi/Sq Mi							
Unclassified Rd – Density (Mi/Sq Mi)*	**Non-NF (non-Industrial Forest Lands)**	0.7 Mi/Sq Mi							
Unclassified Rd – Density (Mi/Sq Mi)*	**BLM**	Unknown, but classified roads on BLM within the project area boundary exist at a density of 0.1 Mi/Sq Mi							

* Estimated densities of unclassified roads were developed using the Fremont Transportation System Update 99 GIS corporate layer (TSU 99), the Primary Base Series maps (PBS) maps, field observations and interpretation of post-fire aerial photographs.
Mi/Sq. Mi =miles of road per square mile

Data above represents the current open road system from initial development and subsequent road management activities over the past 125 years. Historically, the Fremont National Forest emphasized timber management. A large road system was constructed to gain access to timber and other forest resources. Classified roads are roads that are determined to be needed for long-term motor vehicle access, including state roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service.

Unclassified roads are roads that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as trails; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization.

TOOLBOX FIRE RECOVERY PROJECT – PAST ACTIVITIES (all occurred in 2002)

Table A-7 - BURNED AREA EMERGENCY REHABILITATION (BAER) PROJECTS – National Forest

BAER Project	**Subwatershed** (Or other location designation)							
	West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Road and Trails – Ditch and Inlet Cleaning	Over 15 miles of road had drainage ditches cleaned allowing for proper drainage of water during increased water yields. Water barring occurred on less miles of road than initially proposed, because attempts would result in impassable roads and possible erosion damage. The decision was made to only clean the ditches along these roads.							
Road and Trails – Drainage Dip Installation						Large drainage dip constructed at the Rd 2914 crossing of Duncan Creek to alleviate likely increased flow.		
Road and Trails – Relief Culvert Installation	Several areas upstream of the Road 27 crossing of West Fork of Silver Creek crossing burned at high intensities. Potential for debris and high water. Two relief culverts were installed at the high flow elevation of the existing culvert to alleviate increased flow.							
Log Erosion Barriers	Log barriers treatments were used in 3 units, totaling 13 acres where logs were available or in other areas rice wattles could be substituted to reduce water velocity, break up concentrated flows, and induce hydraulic roughness to burned watersheds. As with the Winter fire, log barrier units and rice wattle units were combined.							

Note: See "Table A-14 - FUTURE ACTIVITIES (2003 -) / NOXIOUS WEED TREATMENT – All Ownerships" for the Noxious Weed Treatment planned for 2003 under the BAER or other on-going weed treatment programs. See "Table A-15 - FUTURE ACTIVITIES (2003 -) / ALL ACTIVITIES - Bureau of Land Management for other activities planned for 2003 under the ESR Environmental Assessment prepared by the BLM.

TOOLBOX FIRE RECOVERY PROJECT – PAST AND PRESENT ACTIVITIES (through 2003)

Table A-8 - LIVESTOCK GRAZING ALLOTMENTS – National Forest

Allotment - (period covered)	**Subwatershed** (or other location designation)							
	West Fork Silver Creek	Upper Silver Cr.	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Yamsay Mtn – (1944-1945)	1000 Sheep	Open Season	July 1 – Sept 30					
Yamsay Mtn - (1946-1960)	172 Cattle	Open Season	May 16 – Sept 15					
Yamsay Mtn – (1961-1966)	323 Cattle	Open Season	May/June – Sept 20					
Yamsay Mtn – (1967-1978)	100 Cattle	Open Season	May 21 – Sept 20					
Yamsay Mtn – (1979-1991	200 Cattle	Rest-Rotation	Open Season May 21 – Sept 20					
Yamsay Mtn – (1992-1999)	Not Used							
Yamsay Mtn – (2000-2002)	50 – 100 Cattle	Short Duration	July 13 – Aug 31					
Yamsay Mtn – (2003) PRESENT	100 Cattle	Early Deferred	July 16 – Aug 31					
Winter Rim –* (1966-1980)			1500 – 2500	_____	Sheep	_____	Open Season	July – Aug/Sept
Winter Rim – (1981-1989)			300	_____	Cattle	_____	Open Season	July 1 – Sept 30
Winter Rim – (1990-2000)			282	_____	Cattle	_____	2 Pasture Rotation	June 25 – Sept 24
Winter Rim – (2001-2002			660	_____	Cattle	_____	Early Season	June 15 – July 25
Winter Rim – (2003) PRESENT			282	_____	Cattle	_____	2 Pasture Rotation	June 25 – Sept 24

* Winter Rim Allotment occurs in Thompson Reservoir, Benny Creek, East Duncan Creek, and Upper Duncan Creek subwatersheds.

TOOLBOX FIRE RECOVERY PROJECT – PAST AND PRESENT ACTIVITIES (through 2003)

Table A-8 - LIVESTOCK GRAZING ALLOTMENTS – National Forest (continued)

Allotment - (period covered)	**Subwatershed** (or other location designation)							
	West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Thompson Valley* (1946-1955; then included in Foster Butte)		220 Cattle Open Season		_ _ _ _ _ _ _ _ _ _	May 16 – Sept 20			
Silver Creek Common (1940-1942)			1000 Sheep Sept					
Silver Creek (1961 – 1980; then included in Foster Butte)			100 Cattle Open Season May 21 – Sept 5					
Foster Butte (1966-1979)	1602 Cattle			Rest Rotation				May 21 – Sept 20
Foster Butte (1980-1992)	6807 AUMs (Cattle)			Rest Rotation by Pasture (Rest – Deferment – Early Season)				May - Sept
Foster Butte (1993-2002)	6297 AUMs (Cattle)			Early Season				May – July/August
Foster Butte (2003) PRESENT	4641 AUMs (Cattle)			Early Season with Light Use in Pastures that Burned				May – July/August

AUMs = Animal Unit Months

*Thompson Valley Allotment occurs in Upper Silver Creek, Thompson Reservoir, and Benny Creek subwatersheds.

TOOLBOX FIRE RECOVERY PROJECT – PAST AND PRESENT ACTIVITIES (through 2003)

Table A-8 - LIVESTOCK GRAZING ALLOTMENTS - BLM and Private (continued)

Allotment – (period covered)	**Subwatershed** (or other location designation)							
	West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Silver Bridge* (Prior to early 80s)	262 AUMs Rest Rotation		_ _ _ _ _ _ _ _	Mid April – Mid January				
Silver Bridge (early 1980s - 2003)	262 AUMs Rest Rotation with Riparian Pasture		_ _ _ _ _ _ _ _	Mid April – Mid June				
Upper Bridge (Prior to early 80s)	108 AUMs Spring/Fall with 2 Seasons							
Upper Bridge (early 1980s – 2003)	108 AUMs Rest Rotation early March – early October							
D. Indian–Duncan (Prior to early 80s)**				586 AUMs Deferred Grazing	_ _ _ _ _ _ _ _	early May – late June		
D. Indian – Duncan (early 80s – 2002)				Little change from above.	_ _ _ _ _ _ _ _	Pastures and rest periods added		
D. Indian – Duncan (2003)				Rest – no use	_ _ _ _ _ _ _ _	Rest – no use		
Murdock (Prior to early 1980s)				705 AUMs early May – late June				
Murdock (early 1980s - 2003)				545 AUMs Rest Rotation early May – late June				
Silver Creek (prior to early 80s - 2003)				200 AUMs mid April – late May				

AUMs = Animal Use Months

* Silver Bridge Allotment occurs in West Fork Silver Creek, Upper Silver Creek, and Middle Silver Creek subwatersheds.

** D.Indian-Duncan Allotment occurs in Middle Silver Creek and Lower Duncan Creek subwatersheds.

Grazing on Private Land fenced out of the Allotments:

T30S R15E Section 28 NE1/4 (160 acres) and T30S R15E Section 33 NE1/4 and N1/2SE1/4 (240 acres)

This land lies within subwatershed 6. Prior to 1985, these acres were not fenced out of the Foster Butte Allotment. From about 1985 to 1989, an average of 100 head grazed these two fenced areas May through Sept. For the past 12 years (1990 to present), both fenced areas are used by the ZX Ranch to gather straggler cattle from the Foster Butte Allotment. This use varies depending on the success of the initial gather and move off each pasture in July/August. This is how the areas are will be used in 2003 and in the future.

T29S R13E Section 36 E1/2SW1/4, NW1/4SE1/4 and SE1/4SE1/4 (200 acres) *USFS* T21S R13E Section 36 SW1/4SE1/4 (40acres) through a Special Use Permit
For the past 12 years, 200 pairs total have used these areas May through June for approximately 2 months and in the fall for approximately 2 weeks. Use prior to this was similar with numbers varying. Both areas will be rested in 2003. Use planned for 2004 will be similar to the past 12 years.

General Notes on Livestock Grazing Allotments:

1. AUMs = Animal Unit Months. One AUM is one month of use and occupancy by one adult cow.
2. No portion of the Sycan Allotment is currently within the area of Cumulative Effects consideration (the eight subwatersheds). Prior to 1966, only about 1 percent of a single subwatershed (Thompson Reservoir) was within the Sycan Allotment, and therefore it is not included in the above tables. See analysis file for more information about the Sycan Allotment.
3. Years in the above tables that are not reported (for example Yamsay Mountain prior to 1944) indicate that no records were found for those years.
4. Where information from two or more allotments appears simultaneously in a given subwatershed, it is due to separate portions of the respective allotments occurring within separate portions of that subwatershed. For example, Foster Butte and Yamsay Mountain occur in separate portions of the West Fork Silver Creek, Upper Silver Creek and Thompson Reservoir subwatersheds.
5. Maps are available in the analysis file that display how much (what portion) of a given subwatershed is occupied by a given allotment (see Keil, M. 2003. "Grazing History with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project).

TOOLBOX FIRE RECOVERY PROJECT – PAST AND PRESENT ACTIVITIES (through 2003)

Table A-9 - WILDLIFE HABITAT AND WATERSHED IMPROVEMENT PROJECTS – All Ownerships

Past Activity	Ownership	**Subwatershed** (or other location designation)							
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Aspen Enhancement	National Forest			40 Ac '00-		130 Ac '00-			
Aspen Enhancement (B)	National Forest	10 ac '00-							
Juniper Thinning	National Forest	150 ac '00-			150 ac '00-				
Juniper Thinning (B)	National Forest		60 ac '00-		60 ac '00-			90 ac '00-	30 ac '00-
Ponderosa Pine Thinning	National Forest				330 ac '00-				
Ponderosa Pine Thinning B	National Forest							4 ac '00-	2 ac '00-
Major Culvert Replacement	National Forest	2 Replacements in '00		1 Replacement in '00					
Road Decomm	National Forest	60 miles (total) of decommissioning in: West Fork Silver Creek, Upper Silver Creek, Thompson Reservoir and Benny Creek subwatersheds (1995 – 2001)							

Note: Contacts with both the BLM and private landowners within the area of cumulative effects analysis revealed no additional project activity.

See Toolbox Fire Recovery Project Analysis File for more detailed source information – such as project names and exact year of activities.

Aspen Enhancement – Aspen Enhancement: thinning of competing conifers. Conifers <12" dbh and juniper <16" dbh thinned. Slash depth of 18"
Aspen Enhancement (B) – Same as above, but within area burned by the Toolbox Complex Fires
Juniper Thinning - All junipers <16" dbh thinned. Slash depth of 18" to 36".
Juniper Thinning (B) - Same as above, but within area burned by the Toolbox Complex Fires
Ponderosa Pine Thinning – Thinning in ponderosa pine stands. All conifers <8" dbh and juniper <16"dbh thinned. Slash depth of 18".
Ponderosa Pine Thinning (B) - Same as above, but within area burned by the Toolbox Complex Fires
Major Culvert Replacement – Installation of 'oversized' pipe arch type culvert to improve fish passage; one each in West Fork Silver Creek, North Fork Silver Creek and Guyer Creek.
Road Decomm. – Road decommissioning: Activities that result in the stabilization and restoration of unneeded roads to a more natural state.

TOOLBOX FIRE RECOVERY PROJECT – PAST, PRESENT AND FUTURE ACTIVITIES

Table A-10 - DIVERSIONS, DAMS, RESERVOIRS AND IMPOUNDMENTS – All Ownerships

Type of Facility		Subwatershed (or other location designation)							
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Stream Diversions		3 Diversions in the following amount (cfs): 1, 3 and 525			6 Diversions in the following amount (cfs): 1, 1, 1.5, 2.6, 3, 15.4 and 60		2 Diversions in the following amount (cfs): 1 and 1.4		
Dams and Reservoirs	Storage (acre-feet)	Xxxxxx Diversion Dam		19,660 ac-ft Thompson Valley Reservoir			284 acre-feet Duncan Reservoir		
	Surface Area (acres)	xxxxxxxxxx		1,900 acres			4 acres		
Water Impound-ments	0-1 acre-feet	1			3	3	4		
	1-4 acre-feet	1	1			1	1		
	Larger		1 - 460 acre-feet (irrigation)	1- 4410 acre-feet (irrigation)			1 - 284 acre-feet (recreation)		

cfs = cubic feet per second.

Dams and Reservoirs – These include: Thompson Valley Reservoir (dam constructed in 1922 for the purposes of providing water for irrigation); Duncan Reservoir (created in 1973 to provide recreation and irrigation); and "The Diversion Dam" (late 1980s), located just downstream of the confluence of Silver Creek and West Fork Silver Creek to provide regulated flows for irrigation.

Water Impoundments - The purposes of these water impoundments are to collect surface water runoff and are typically held in ponds. These ponds are used for irrigation, livestock and wildlife watering, and dust abatement activities on roads. The three major impoundments shown indicate the primary use for each and the amount of the total reservoir capacity that is allocated for that use.

Activities associated with the water rights (diversions, dams, impoundments) have been occurring for up to 125 years in the area. All listed facilities are currently in use with no foreseeable changes in use into the future.

TOOLBOX FIRE RECOVERY PROJECT – PAST, PRESENT AND FUTURE ACTIVITIES

Table A-11 - POWERLINES AND COMMUNICATIONS FACILITIES UNDER PERMIT– All Ownerships

Facility	**Subwatershed** (or other location designation)							
	West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
500 KV BPA/PGE/PPL Powerline			1.5 miles all ownerships, all outside burned area 80 acres 1970	5.5 miles all ownerships, both inside and outside burned area 300 acres 1970	3.5 miles all ownerships, both inside and outside burned area 190 acres 1970			6 miles all ownerships, all inside burned area - 330 acres 1970
500 KV PPL Branch/Summer Lake Substation						4.5 miles all ownerships, all inside burned area 100 acres 1985	1 mile all ownerships, all inside burned area 20 acres 1985	2 miles all ownerships, all inside burned area 40 acres 1985
Surprise Valley Electric powerline						1.5 miles all ownerships, all inside burned area 20 acres 1987		
Midstate Elec. Powerline (Farm Well area)				8 miles all ownerships, both inside and outside burned area 100 acres 1989				
Midstate Electric Powerline (Thompson Resv/Silver Cr. Area)	5 miles all ownerships, both inside and outside burned area 70 acres 1960	3 miles all ownerships, both inside and outside burned area 40 acres 1960	6 miles all ownerships, both inside and outside burned area 80 acres 1960	5 miles all ownerships, both inside and outside burned area 70 acres 1960				
Indian Mountain Communications Site						Multiple Comm. Towers at site. 2 acres 1970		

Note: Dates indicate approximate year of initial development (or initial permit issuance) at which time all conifers and most juniper were cleared from the corridor. This typically involved a small timber sale. Ongoing maintenance in the form of mechanical vegetation removal occurs approximately once per decade, resulting in a typically vigorous grass-shrub community being perpetuated. All listed facilities are currently in use with no foreseeable changes in use into the future.

Acreages are approximate and are based on the following averages:

500 KV BPA/PGE/PPL powerline: 450 feet wide corridor
500 KV PPL Branch Line: 175-foot wide corridor
Other powerlines: 110-foot corridor

TOOLBOX FIRE RECOVERY PROJECT – PAST, PRESENT AND FUTURE ACTIVITIES

Table A-12 - PERSONAL USE FIREWOOD – National Forest

	Subwatershed (Or other location designation)							
	West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Past Firewood Cutting	In the past 20 years an average of approximately 300 personal use firewood permits were sold per year on the Silver Lake Ranger District. An average of 1,200 cords or 600 thousand board feet (600 Mbf) were removed per year. An estimated 20 – 25 percent of this total came from the eight subwatersheds in the cumulative effects analysis area. Dead lodgepole pine trees, primarily killed by the mountain pine beetle, have been the preferred source of firewood by most permit holders							
Present Firewood Cutting	In 2002 permits for 1,570 cords or approximately 785 Mbf were sold for the District. An estimated 20 percent of this total came from the 8 subwatersheds in the cumulative effects analysis area. Most of the increase came from residents in larger communities to the north such as La Pine, Bend, and Redmond. The preferred cutting area for these residents is the northern end of the Ranger District close to Highway 97, outside the analysis area.							
Future Firewood Cutting	In the near future firewood cutting in the moderate to very high burn intensity stands is expected to decrease slightly until charred bark is loose enough to fall off the dead stems. The long-term opportunities for firewood cutting in the project area by the public and members of the Klamath Tribe will primarily depend on the long-term access management strategy. Members of the Klamath Tribe can gather free firewood from former Tribal lands. Approximately 3 ½ sections of former Tribal lands are in the southern end of the Silver Fire. Wood cutting by Tribal members rarely occurs in the project area because of the distance from their homes. Former Tribal lands west of the project area in the Winema National Forest are considerably closer to most members' residences.							

TOOLBOX FIRE RECOVERY PROJECT – PAST, PRESENT AND FUTURE ACTIVITIES

Table A-13 - TIMBER MANAGEMENT– Private Lands

		Subwatershed (Or other location designation)							
		West Fork Silver Creek	Upper Silver Cr.	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
U.S. Timberlands Co. , L.P. (UST)	*Within 2002 Fire Perimeter*	*none*	*none*	*none*	*500 acres* (all acres approx.)	*5700 acres*	*3200 acres*	*6100 acres*	*7700 acres*
	Entire Subshed	100 acres	200 acres	2100 acres	1900 acres	8300 acres	3200 acres	6100 acres	8150 acres
Other Private (Entire Subshed)		150 acres	1550 acres	4900 acres		600 acres			600 acres

	SILVER FIRE AND VICINITY	**TOOLBOX FIRE AND VICINITY**
Past Activities Industrial Forest Lands (20th century)	Extensive logging throughout the 20th century. 1940s - 1960s: partial cutting of large ponderosa pine. 1970s: ponderosa pine above 24 inches dbh and other logging. Increase in reforestation by planting. 1980s - 1990s: diameter limit lowered to15 inches dbh. White fir and lodgepole pine stands also harvested. By 2000 almost all commercial forest stands were logged at least once. Almost no precommercial thinning operations were/had been conducted. Approximately 17 percent of the industrial forestland was in plantations consisting of trees that had not reached marketable size. Approximately 72 percent was in previously logged and reforested land that contained a scattered commercial component.	
Past Activities Industrial Forest Lands (2000 – July 2002)	Wasser and Winters harvested the remaining merchantable timber from holdings nr 500 Reload.	UST reentered approximately 6,000 acres of the stands that contained commercial volume
Past Activities Non- Industrial Forest Lands (20th Century – July 2002)	Partial harvesting of limited number of large PP no plantations resulting from clear cutting. Areas of marginal timber with widely scattered trees had cattle grazing as primary use. Several homesteads.	
Present Activities Industrial Forest Lands (Aug 2002 – 2003)	Wasser and Winters Company determined not enough commercial volume to conduct salvage	UST salvaged 16,000 ac Fall 2002 - 2003. Both dead and green timber harvested. 5,000 acres site preparation by ripping with possible additions in 2003. Leave landing piles untreated.
Present and Future Non-Industrial Forest Lands Aug (2002 – 2005)	Salvage fire killed timber and some large green timber; plant areas to State density requirements	
Future Activities Industrial Forest Lands (2003 – 2005)		UST to plant approximately 18,000 acres (10,000 from salvage, 6,000 from logging prior to the fires, and 2,000 from burned plantations) of clearcut and partial cut units in 2003-2004.

Private forestland is classified as "industrial or "non-industrial". Industrial forestland is owned by businesses engaged in production of raw material for forest products. Non-industrial forestland is primarily owned by individuals, ranchers, and companies that occasionally sell raw material. Over 90 percent of the private land in the area is held by three owners, within six subwatersheds, as follows: United States Timberlands (UST) within Thompson Reservoir, Middle Silver, Benny Creek, Lower Duncan Creek, East Duncan Creek and Upper Duncan Creek; Wasser & Winters within Thompson Reservoir; Pernoll within Thompson Reservoir. Historically, both UST holdings and Wasser & Winters holdings were owned by Weyerhaeuser. The other 10 percent of scattered private lands are holdings by other owners in all eight subwatersheds or holdings by these three owners in subwatersheds besides the six referenced above. Essentially all of private land within the Toolbox Portion of the 2002 fires (and vicinity) is UST industrial forestland. Private land within the Silver Fire Portion (and vicinity) is evenly divided between industrial and non-industrial. A meaningful look at past and future activities on private land is provided by an examination of activities grouped by industrial vs. non-industrial. More private land management history can be found in the Toolbox Fire Recovery Project analysis file. See "Pierce, G. 2003. "Timber Activities on Private Land with Potential Cumulative Effects." USDA, Forest Service" and

"Puddy, S. 2003 "ISAT by Mortality by Ownership" USDA, Forest Service. Toolbox Fire Recovery Project." These sources, and others were used during cumulative effects analysis for the Toolbox Fire Recovery Project. The summarized table above is provides an overview of past, present and future activities.

TOOLBOX FIRE RECOVERY PROJECT – FUTURE ACTIVITIES (2003 -)

Table A-14 - NOXIOUS WEED TREATMENT – All Ownerships

Weed Species	Ownership	Subwatershed (or other location designation)							
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
		<<<<< **Silver Fire** >>>>>>>>>			<<<<<<<<<<<<< **Toolbox Fire** >>>>>>>>>>>>>				
Dalmatian toadflax, leafy spurge, yellow star thistle, and others	**National Forest**	100 – 120 acres of vegetative and chemical treatment: When fire suppression activities were occurring, there was an influx of dozers, engines, fire personnel, etc. from locations outside of the forest, county, and state. There is a high potential that the equipment and trucks used for suppression activities carried weed seeds into the burned area. Several pieces of fire suppression equipment came from areas in California that are infested with yellow star thistle. With limited inspections of this equipment, there is a concern fire lines are contaminated with yellow star thistle. Treatment is planned for spring 2003 with spot seeding of sterile annual grass to limit weed spread in select, scattered dozer lines. The Forest Service has a contract with a private entity for the chemical treatment of noxious weed sites 2003 and 2004.							
Medusahead rye and others	**BLM**	Upper Silver Cr., Middle Silver Cr., Lower Duncan Cr - To minimize the potential for noxious weeds and non-natives to expand, the BLM is proposing to seed and plant tree seedlings in an effort to increase competitive desirable vegetation (ESR, 2003) – see the table labeled "FORESEEABLE FUTURE ACTIVITIES (2003 -) ALL ACTIVITIES - Bureau of Land Management". When noxious weed species do occur, the BLM has a contract with a private entity for noxious weed treatment.							
All Noxious Weeds	**Non-Industrial Forest Land Ownership**	The disturbance created by the fire and fire suppression activities provided prime habitat for noxious weeds. The Forest Service and BLM treatments in 2003 and 2004 help reduce noxious weeds and non-native species spreading onto private lands from federal lands.							
All Noxious Weeds	**Industrial Forest Ownership**	Once salvage activities are completed, industrial forest owners plan to plant tree seedlings as soon as possible. Planting seedlings will create long-term shade and competition to noxious weeds and nonnative species.							

TOOLBOX FIRE RECOVERY PROJECT - FUTURE ACTIVITIES (2003 -)

Table A-15 - ALL ACTIVITIES - Bureau of Land Management

Planned Activity	Ownership	Subwatershed (or other location designation)							
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Fire Salvage	BLM						71 ac '03-		
Seedling Planting	BLM		250 ac '03-'05				600 ac '03-'05		
Seeding	BLM		200 ac '03-'05		90 ac '03-'05		1650 ac '03-'05		
Juniper Treatment	BLM	1000 ac '05	1000 ac '05		1000 ac '05		10000 ac '05		

See Toolbox Fire Recovery Project Analysis File for more detailed source information – such as project names and references to existing NEPA documents.

BLM = Bureau of Land Management
ac = Acres
Seedling Planting = Planting of ponderosa pine and bitterbrush seedlings
Seeding = seeding of grasses, both aerial and ground application
Juniper Treatment = Areas to be treated mechanically or prescribed burned to reduce encroachment within dense populations of juniper

TOOLBOX FIRE RECOVERY PROJECT – FUTURE ACTIVITIES (2003 -)

Table A-16 - ALL OTHER ACTIVITIES - National Forest (Other than Toolbox Project)

Planned Activity	**Subwatershed** (or other location designation)							
	West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Underburning/ Prescribed Fire	4000 ac '05		850 ac '03 -	4200 ac '04-05	550 ac '03 -			
Commercial Thinning**	600 ac '05	800 ac '04	400 ac '04		500 ac '04			
Temporary Road Const.	1.0 mi '05	1.0 mi '05	0.5 mi '04		0.8 mi '04			
Activity Fuels Treatment**	62 ac Crsh '04 600 ac '07	2 Piles '03 - 800 ac '06	400 ac '06		500 ac '06			
Pre –Comm. Thinning**	300 ac '03 - 600 ac '08	800 ac '07	400 ac '07		500 ac '07			
LWD	2 miles '04							
Culvert Replacement	2 culverts '04							
Fremont Point Cabin Rebuild					build cabin on existing site '04			
Harris Spring Trailhead					Const. Tr Head '04			
Fremont NRT Relocate	Approx 1 mi, including 2 bridges '04	Approx ½ mi '04				Approx ½ mi '04		
Fremont NRT Reconstruct	Approximately 18 miles of trail reconditioning or reconstruction, including refurbishing tread, adding or refurbishing drainage features such as waterbars and routine maintenance such as removal of fallen trees, which will be far more abundant than 'normal'; 2003-2005							

** Where the acreage on these three activities "match" and the years of implementation reflect an estimated 4-year sequence, it should be assumed that the acres involved are the same acres through the 4-year sequence. See Toolbox Fire Recovery Project Analysis File for more detailed source information

ac = Acres

Activity Fuels Treatment = post-harvest Activities Fuels Treatment by one of the following methods, based on post-harvest assessment: Crushing, lop and scatter, jackpot burn, underburning in harvest units, broadcast burning or landing pile burning

Piles = Landing Piles (or other slash piles) burned. Piles sizes range between 1/100 Ac and 1/45 Ac. Typical size 1/8 Ac.

Crsh = Slash crushing (treating slash by mechanical crushing to lower the fuels profile)

LWD = placement of large woody debris in perennial streams

NRT = National Recreation Trail

Bridge Creek Subwatershed (of the Silver Creek Watershed) - In addition to the above activities, it is anticipated that the following activity would occur in the Bridge Creek Subwatershed which is adjacent to the area of cumulative effects analysis, during the period 2005 to 2009. Planning under NEPA has not yet commenced for this project activity: Plantation Thinning - 3000 acres; Harvest, precommercial thinning, underburning - 5000-7000 acres; Juniper Thinning - 1000 acres; Mountain Mahogany Enhancement - 500 acres; Black Cottonwood Enhancement - 200 acres; Culvert Replacement - three culverts; Instream Restoration - 2 miles; Aspen Restoration - 150 acres; Road Closure and Decommissioning - 15 miles.

TOOLBOX FIRE RECOVERY PROJECT – FUTURE ACTIVITIES (2004 -)

Table A-17 - LIVESTOCK GRAZING ALLOTMENTS – All Ownerships

Allotment - (period covered)	**Ownership**	**Subwatershed** (or other location designation)							
		West Fork Silver Creek	Upper Silver Creek	Thompson Reservoir	Middle Silver Creek	Benny Creek	Lower Duncan Creek	East Duncan Creek	Upper Duncan Creek
Yamsay Mtn (2004 -)	**National Forest**	200 Cattle Early Deferred July 16 – Aug 31 PLANNING under NEPA in 2007							
Winter Rim (2004 -)	**National Forest**			NEPA Decision		Before 2004 Grazing Season		Use will be based on 2003 Monitoring and NEPA Decision	
Foster Butte (2004 -)	**National Forest**	NEPA Decision Before 2004 Grazing Season. Use will be based on 2003 Monitoring and NEPA Decision							
Grazing in 2003 and beyond in the BLM allotments below will continue as currently permitted in all but the Dead Indian-Duncan Allotment. These BLM Allotments are scheduled for Rangeland Health Assessments and any changes needed will be determined at that time.									
Silver Bridge (2004 -)	**BLM**	262 AUMs Rest Rotation with Riparian Pasture			Mid April – Mid June				
Upper Bridge (2004 -)	**BLM**	108 AUMs Rest Rotation early March – early Oct							
D. Indian – Duncan 2004	**BLM**				Rest – no use		Rest – no use		
D. Indian – Duncan (2005 -)	**BLM**				Decisions will be made based on monitoring…		…of the pastures during 2003 and 2004		
Murdock (2004 -)	**BLM**				545 AUMs Rest Rotation early May – late June				
Silver Creek (2004 -)	**BLM**				200 AUMs mid April – late May				

Grazing on Private Land fenced out of the Allotments:

T30S R15E Section 28 NE1/4 (160 acres) and T30S R15E Section 33 NE1/4 and N1/2SE1/4 (240 acres): This land lies within subwatershed 6. Prior to 1985, these acres were not fenced out of the Foster Butte Allotment. From about 1985 to 1989, an average of 100 head grazed these two fenced areas May through Sept. For the past 12 years (1990 to present), both fenced areas are used by the ZX Ranch to gather straggler cattle from the Foster Butte Allotment. This use varies depending on the success of the initial gather and move off each pasture in July/August. This is how the areas are will be used in 2003 and in the future.

T29S R13E Section 36 E1/2SW1/4, NW1/4SE1/4 and SE1/4SE1/4 (200 acres) *USFS* T21S R13E Section 36 SW1/4SE1/4 (40acres) through a Special Use Permit: For the past 12 years, 200 pairs total have used these areas May through June for approximately 2 months and in the fall for approximately 2 weeks. Use prior to this was similar with numbers varying. Both areas will be rested in 2003. Use planned for 2004 will be similar to the past 12 years.

Cumulative Effects Bibliography

Callaghan, C. 2003. "Power Line Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Elston, R. 2003. "Planned Bureau of Land Management Activity in Response to the Toolbox Fire Complex with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Elston, R. 2003. "Toolbox Fire Recovery Project - Future Activity Already Covered With NEPA Decisions." USDA, Forest Service. Toolbox Fire Recovery Project.

Fildes, E. 2003. "2002 Suppression Backfiring Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Fildes, E. 2003. "2002 Suppression Hazard Tree Removal Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Fildes, E. 2003. "2002 Suppression Retardant Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Fildes, E. 2003. "Bureau of Land Management Fire and Fuels Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Fildes, E. 2003. "Fuels Dozer Line Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Fildes, E. 2003. "Fuels Past Projects and Fire History with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Fildes, E. 2003. “UST Fuel Activity with Potential Cumulative Effects.” USDA, Forest Service. Toolbox Fire Recovery Project.

Hills, L. 2003. "Recreation and Trails Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Keil, M. 2003. "Grazing Allotments History with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Keil, M. 2003. "Grazing History with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Markus, A. 2003. "Wildlife Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Pierce, G. 2003. "Firewood Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Pierce, G. 2003. "Summary of Timber Activities on Private Land by Subwatershed with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Pierce, G. 2003. "Timber Activities on Private Land in the Silver Fire with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Pierce, G. 2003. "Timber Activities on Private Land on the Silver Fire – Industrial vs. Non-Industrial with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Pierce, G. 2003. "Timber Activities on Private Land on the Toolbox Fire with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Pierce, G. 2003. " Timber Activities on Private Land on the Toolbox Fire- Industrial vs. Non-Industrial with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Pierce, G. 2003. "Timber Activities on Private Land with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Puddy, S. 2003. "ISAT by Mortality by Ownership" USDA, Forest Service. Toolbox Fire Recovery Project.

Puddy, S. 2003. "Silviculture Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Puddy, S. 2003. "Summary of Silviculture Activity with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Reba, M. 2003. "Road Density on the Toolbox Project Area by Subshed and Alternative." USDA, Forest Service. Toolbox Fire Recovery Project.

Wilson, J. 2003. "Activities List for Forest Service, Bureau of Land Management (BLM) and Private Lands Weed Treatment with Potential Cumulative Effects." USDA, Forest Service. Toolbox Fire Recovery Project.

Zamudio, D., M. McNamara, M.Reba 2002. "Fall 2002 BAER Accomplishment Report - Toolbox Fires." USDA, Forest Service. Toolbox Fire Recovery Project.