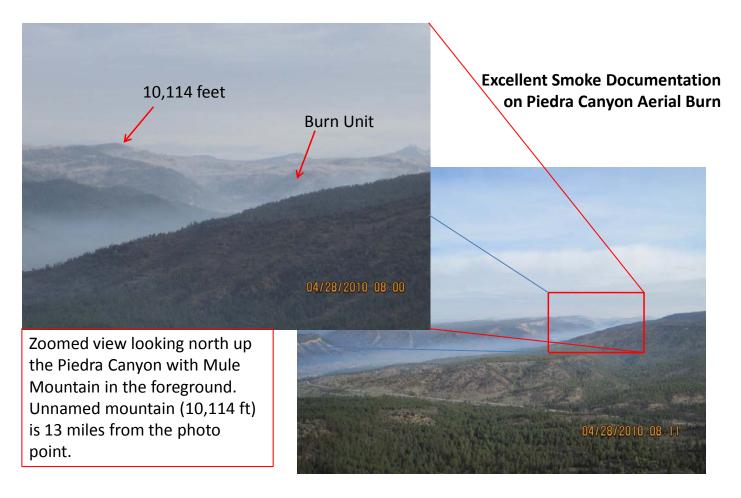


# PRESCRIBED FIRE IN COLORADO

ANNUAL SUMMARY REPORT for Calendar Year 2009



These photos taken the following morning at 8:00 and 8:10 AM. They are far enough from burn to see plume dispersion and the sun is at the photographer's back.

Air Pollution Control Division Technical Services Program (303) 692-3224 June 30, 2010

#### I. INTRODUCTION

Colorado's prescribed fire smoke management program is implemented under the requirements of Colorado Air Quality Commission Regulation 9, <u>Open Burning, Prescribed Fire, and Permitting</u> (Regulation 9). Requirements for significant users of prescribed fire permitting, reporting of activity, and collection of fees to cover the cost of the smoke management program are included in the regulation. This report summarizes prescribed fire activities of a number of agencies and several private landowners. The governmental agencies are:

- Colorado State Forest Service (CSFS)
- U.S. Forest Service (USFS)
- National Park Service (NPS)
- U.S. Bureau of Land Management (BLM)
- U.S. Fish and Wildlife Service (USF&WS)
- Colorado Division of Wildlife (CDOW)
- US Air Force Academy (USAFA)
- US Army Fort Carson (USAFC)
- Rocky Mountain Fire (RMFD)
- City of Boulder Wildland Fire Program (BWFP)
- Larimer County Open Space Program (LCOS)
- Jefferson County Open Space (JCOS)
- Boulder County Open Space (BCOS)

- City of Fort Collins Wildland Fire Program (FCWFP)
- West Metro Fire Rescue (WMFR)
- Colorado State Parks (CSP)
- Colorado State Land Board (SLB)
- Douglas County Parks (DCP)
- Lefthand Fire Protection District (LFPD)
- Jefferson County Wildland Fire Mitigation (JCWFM)
- Boulder Mountain Fire Protection District (BMFPD)
- Platte Canyon Fire Protection District (PCFPD)
- Red, White & Blue Fire Protection District (RWBF)

This report summarizes information about the projects these agencies proposed and completed during 2009. Since 1990 the land management agencies have annually reported all planned ignition projects to the Division. In January 2002, private landowners using planned ignitions to manage wildlands also started reporting their burning activity.

This report includes an annual summary of the emission inventory, a daily inventory is available. For additional information concerning the prescribed burning emission inventory, contact Coleen Campbell at (303) 692-3224. For information regarding Colorado's prescribed fire program, visit our website or contact us.

Field

#### II. PRESCRIBED FIRE ACTIVITY

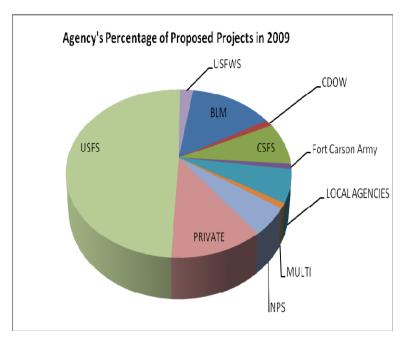
A permit application is submitted to the Division for all proposed prescribed fire projects. For each day burning is planned, a notification form is submitted to the Division. Once the burning is completed, a daily activity form is submitted. Each year the daily activity data is quality-assured by submittal of an annual summary report. This report summarizes only annual activity; contact the Division for daily information about a specific date or project.

Land managers are required to obtain a permit from the Division prior to ignition. The permit application includes the proposed dates of the burn, the burn purpose(s), smoke sensitive areas that have the potential to be impacted by the burn, the proposed size of the burn and the smoke mitigation measure to be taken. **Table I** is a summary of the proposed planned ignition burns by permittee. **Figure I** indicates the percentage of the total projects proposed by each of the entities in 2009.

Activity information concerning individual prescribed fire projects is listed in **Appendix A**. The appendix provides information on the total number of acres or piles burned during 2009 on individual projects. The appendix also lists those projects for which no activity occurred. To obtain air pollutant emissions information on a specific project, contact the Division.

TABLE I
<b>Proposed Prescribed Burning Activity</b>
By Permittee 2009

Agency	Broadcast	Acres Proposed	Pile Projects	<b>Total Proposed</b>	Permittee's
	Projects	for Broadcast	Proposed	Volume	Percentage Of All
	Proposed		•		Proposed Burns
BCOS	1	15	6	1,881	1.75%
BLM	31	15,192	26	18,004	14.21%
BMPD	0		1	42	0.25%
CDOW	2	129	3	3,969	1.25%
City of Boulder	1	40	0		0.25%
City of Ft Collins	6	307	1	54	1.75%
CSFS	13	3,448	20	83,886	8.23%
Douglas County OS	1	90	0		0.25%
Fort Carson Army	4	50,000	0		1.00%
JCOS	0		2	270	0.50%
Larimer County OS	1	125	2	76	0.75%
Left Hand FD	0		1	273	0.25%
MULTI	2	940	2	388	1.00%
NPS	9	1,607	12	82,042	5.24%
PRIVATE	8	6,386	37	867,786	11.22%
USFS	69	93,186	129	108,757	49.38%
USFWS	7	5,606	2	900	2.24%
WMFD	2	204	0		0.50%
All Permittees	157	177,275	244	1,168,328	100.00%



BLM= Bureau of Land Management CDOW= Colorado Division of Wildlife CSFS= Colorado State Forest Service Multi= Multiple Agencies

NPS= National Park Service

USAFA= US Air Force Academy

USAFC= US Army Fort Carson USFS= US Forest Service

USF&WS= US Fish & Wildlife Service

### **Local Agencies include:**

BCOS= Boulder County Open Space BMPD=Boulder Mountain Protection Dist. City of Boulder Wildland Fire Program City of Ft Collins Wildland Fire Program Douglas County OS

J COS= Jefferson County Open Space LCOS= Larimer County Open Space LHFD=Left Hand Fire Department RMFD=Rocky Mountain Fire Dept. WMFD= West Metro Fire Department

#### III. EMISSIONS INVENTORY

The Division's permit application and reporting forms provide the information necessary to generate an emissions inventory for prescribed burning in the state. Smoke from prescribed fire contains a complex mixture of carbon, tars, liquids, various gases and particles. The fuel loading, fuel consumption, fuel moisture, burning method, and fuel type influence the air pollutant emissions.

This emissions inventory is only an estimate of the emissions from prescribed fires in Colorado during 2009. To allow for an emissions inventory of prescribed fire to be developed, the land managers report the most accurate burn specific information that is available. For most of the burns this includes an expert estimate of fuel loading and consumption.

The inventory developed consists of the emissions in Colorado from completed prescribed burns by entities that apply for prescribed fire permits. The Division does not receive any emissions information from open burning performed by other parties, such as construction companies and the agricultural industry. This inventory does not include the emissions from wildfires. Wildfire emissions vary greatly from year to year and typically total more than the emissions from prescribed fires.

The permittees report the acreage burned, fuel loading and fuel type composite for this emissions inventory. If it is necessary for APCD to estimate fuel loading for a burn, loadings are estimated by averaging the reported fuel loading of other burns with the same fuel type. For information concerning a specific burn, contact the Division. **Table II** is a summary of typical fuel loadings for various fuels.

#### **EMISSION FACTORS**

The major pollutants from prescribed burning are particulate matter, carbon monoxide, and volatile organic compounds. For the purpose of this report, an inventory of particulate matter, volatile organic compounds (methane and non-methane hydrocarbons) and oxides of nitrogen was developed. Emission factors are available for these pollutants for most of the reported fuel types. The emission factors are reported as pounds of the specific pollutant produced for each ton of fuel that is consumed. **Table III** is a summary of the emission factors used to develop the emissions inventory.

TABLE II AVERAGE FUEL LOADING FOR SELECTED FUEL TYPES FOR COLORADO					
FUEL TYPE	TOTAL FUEL LOADING (tons/acre)	REFERENCES			
Grass	2	Prescribed Fire Smoke Management Guide Aids to Determining Fuel Models for Estimating Fire Behavior (Range of 0.74 to 4.0 T/A is indicated in reference- 2 T/A is the most common loading for Colorado projects)			
Sagebrush	5	Average of reported loading from other burns			
Oakbrush	4	Average of reported loading from other burns			
Pine / Conifer	8	Average of reported loading from other burns			

TABLE III EMISSION FACTORS FOR COLORADO															
FUEL TYPE		EMISSION FACTORS  Ibs/ton										S	REFERENCES		
	Par	ticulate	es *	СО	Volatile	Organics	NO <sub>x</sub> **								
	PM <sub>2.5</sub>	PM <sub>10</sub>	Total PM		Methane	Non Methane									
Grass	18 <b>†</b>	20	20	150	0	0	2.5	AP-42- Rocky Mtn Grasslands & Chaparral Grassland							
Sagebrush	27	30	45	206	12.4	13.8	2.5	USDA Forest Service, Fire and Air Research Station & AP-42, Sagebrush Range Fire							
Oakbrush	16	18	30	124	9	25	2.5	AP-42- Pacific SW Chaparral & Chaparral Shrub							
Aspen	16	18	30	124	9	25	2.5	AP-42- Pacific SW Chaparral & Chaparral Shrub							
Pine/Conifer	60 <sup>*</sup>	60	70	326	11.2	7	2.5	AP-42- Rocky Mtn Underburning Pine & Short- Needle Conifer							
Piled Slash	8 <b>*</b>	8	12	74	3.6	0	2.5	AP-42- Rocky Mtn Logging Slash & Logging Slash Debris							
Pinon / Juniper	9	24	27	167	12	10.4	2.5	AP-42- Pacific SW Pinon/Juniper & Juniper Range Fire							
Other	23▼	26	34	350	9.4	9.2	2.5	AP-42, Rocky Mtn Region Avg							

<sup>\*</sup> Each particulate size category includes all particulates in the smaller size classes

<sup>\*\*</sup> AP-42, Average of Emission Factor Range for All Fuel Types (NO<sub>x</sub>)

<sup>†</sup> Calculated using the average ratio of PM<sub>10</sub> emissions to PM<sub>2.5</sub> emissions from the sagebrush, oakbrush, aspen and pine/conifer emission factors

<sup>\*</sup> AP-42, Pacific NW Underburning Pine (PM<sub>2.5</sub> only)

<sup>★</sup> AP-42, Pacific NW Piled Logging Slash (PM<sub>2.5</sub> only)

<sup>▼</sup> AP-42, Pacific NW Region Avg (PM<sub>2.5</sub> only)

#### **EMISSIONS**

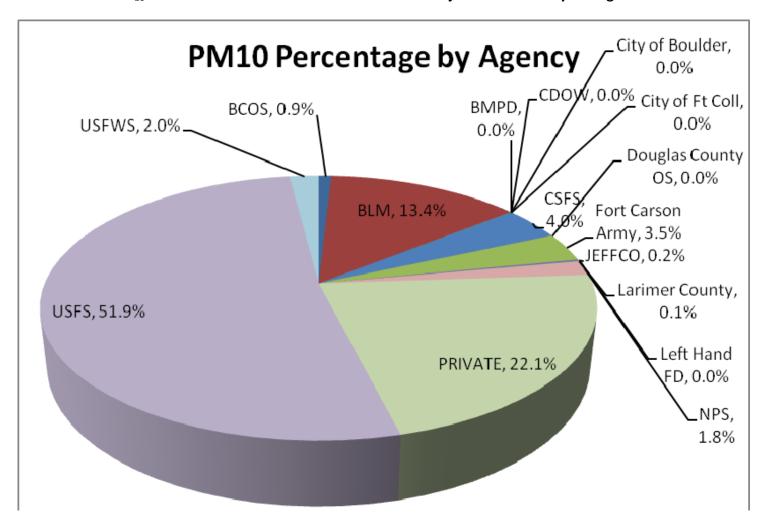
The estimate of the emissions from prescribed fire performed by land managers for 2009 is summarized in **Table IV**. The summary includes the  $PM_{10}$ , VOC,  $NO_x$  and nonmethane hydrocarbon (NMHC) emissions from pile and broadcast burns by permittees. For information regarding other pollutants, contact the Division. Most of the permittees completed at least some of their proposed prescribed burns during 2009. The **Total Acres** column in **Table IV** reflects the acres burned by broadcast burning. The amount of fuel consumed during pile burning is summarized in the **Volume Consumed** column.

	TABLE IV								
	SUMMARY OF AIR POLLUTANT EMISSIONS BY PERMITTEE FOR 2009								
	for Projects with Reported Burning Activity								
AGENCY	NUMBER OF	TOTAL	NUMBER	VOLUME	TOTAL	TOTAL	TOTAL	TOTAL	AGENCY'S %
	BROADCAST	ACRES	OF PILE	CONSUMED	PM10	voc	NOX	NMHC	OF TOTAL
	BURNS		BURNS	(ft³)	(tons)	(tons)	(tons)	(tons)	PM10
BCOS	0		6	258,562	20	9	6	0	0.9%
BLM	20	3,715	17	1,708,289	294	128	57	78	13.4%
BMPD	0		1	6,100	0	0	0	0	0.0%
CDOW	1	27	0		0	0	0	0	0.0%
City of Boulder	1	40	0		1	0	0	0	0.0%
City of Ft Collins	0		1	1,360	0	0	0	0	0.0%
CSFS	7	836	13	1,034,502	89	38	26	3	4.0%
Douglas County OS	1	86	0		0	0	0	0	0.0%
Fort Carson Army	3	12,573	0		77	0	10	0	3.5%
JEFFCO	0		2	43,982	3	2	1	0	0.2%
Larimer County	0		2	21,092	2	1	1	0	0.1%
Left Hand FD	0		1	5,700	0	0	0	0	0.0%
MULTI	1	20	1	22,638	2	1	1	0	0.1%
NPS	6	266	8	426,861	39	17	11	3	1.8%
OTHER	5	208	29	6,360,378	485	218	151	1	22.1%
USFS	29	15,796	73	8,520,282	1,138	495	258	359	51.9%
USFWS	2	1,174	2	28,384	44	1	6	0	2.0%
All Permittees	76	34,741	156	18,438,129	2,195	910	527	444	100.0%

PM10= Particulate Matter under 10 microns NOX= Nitrogen Oxide(s) VOC= Volatile Organic Compounds NMHC= Non Methane Hydrocarbons

Land managers and owners that use prescribed fire to manage wildland areas are charged fees to cover the cost of the Division's prescribed fire program. These fees are based in part on the amount of PM10 emitted by an agency's completed projects during the year. **Figure II** provides each entity's percentage of the total PM10 emissions during 2009 for prescribed fire projects. Contact the Division for more information about the fee program and how data from the emission inventory is used to determine fees.

Figure II
PM<sub>10</sub> Emissions from Permitted Prescribed Fire Projects with Activity during 2009

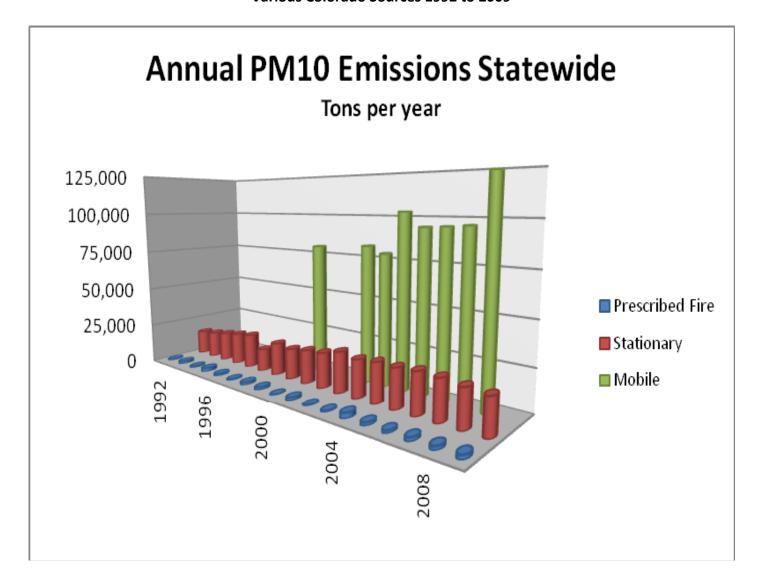


**Figure III** is a comparison of the particulate matter emissions from prescribed fire to other types of emission sources. Although a prescribed fire project may cause significant, short-term impacts to an area, the total emissions from prescribed fire are orders of magnitude less than emissions from stationary and mobile sources. **Table V** provides the values used to create **Figure III.** 

TABLE V Annual PM <sub>10</sub> Emission Inventory for Various Colorado Sources from 1992 to 2009 (Tons per Year)					
Year	Prescribed Fire	Stationary Sources (includes portable and fugitive dust)	Mobile-Statewide (includes tailpipe and road dust emissions)*		
1992	627	15,364	unknown		
1993	1,646	16,452	unknown		
1994	895	18,185	unknown		
1995	2,267	19,783	unknown		
1996	1,298	21,215	unknown		
1997	709	13,897	unknown		
1998	1,684	20,115	unknown		
1999	1,633	18,916	80,229		
2000	390	20,491	unknown		
2001	1,747	21,384	unknown		
2002	666	24,518	82,376		
2003	910	22,715	78,671		
2004	3,093	23,852	98,600		
2005	1,726	23,509	94,565		
2006	1,447	24,385	95,173		
2007	1,988	23,802	96,106		
2008	1,934	22,206	123,606		
2009	2,195	21,105	not yet available		

<sup>\*</sup> Prior to 2002 mobile emission inventories are available only from special studies and were not calculated for each year. In 2009 the mobile source emission inventory was calculated using the **MO**tor **V**ehicle **E**mission **S**imulator (MOVES). This new emission modeling system estimates emissions for mobile sources covering a broad range of pollutants and allows multiple scale analysis. There is an 18-month delay to estimate the mobile source emission inventory.

Figure III
Annual PM<sub>10</sub> Emission Inventory
Various Colorado Sources 1992 to 2009



## Appendix A List of 2009 Projects

A notation of 'No Activity' in the last column means the project was not burned in 2009. Projects are sorted first by agency group then by permit number.

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
BOX-09-238	Heil PA7 Unit 3 Machine Piles	BCOS		51,904
BOX-09-239	Walker Area 7 Stands J/L Slash	BCOS		21,230
BOX-09-242	Heil Geer Meadows RX	BCOS		
BOX-09-244	Reynolds Ranch	BCOS	0	58,925
BOX-09-248	Mud Lake	BCOS	0	36,963
BOX-09-249	Gold Hill Area	BCOS	0	82,764
BOX-09-250	Bald Mountain	BCOS	0	6,776
CRD-09-220	Fonce	BLM	55	
CRD-09-221	Cold Spring Aspen RX	BLM	28	
CRD-09-222	Deer Valley	BLM		
CRD-09-230	Elk Mountain	BLM		
CRD-09-305	Rocky Reservoir	BLM	0	
GJD-09-048	Black Ridge Piles	BLM		637,722
GJD-09-049	Gibbler Piles	BLM		46,085
GJD-09-050	Gunnison River Piles	BLM	0	6,372
GJD-09-245	Black Ridge Broadcast	BLM	275	
GJD-09-266	Battlements	BLM	500	
GJD-09-381	Mee Canyon/Colorado River	BLM	0	
GJD-09-403	Georgia Mesa	BLM	0	
GMF-09-095	Prince Creek RX	BLM	114	
GWD-09-033	Canyon Creek Piles	BLM	0	27,473
GWD-09-034	Silt Tamarisk Piles	BLM	0	12,540
GWD-09-111	Belly Ache Piles	BLM	0	34,987
GWD-09-112	East Sopris Piles	BLM	0	68,432
GWD-09-142	East Sopris RX	BLM	0	
KRD-09-198	Yarmony Mountain	BLM	150	
KRD-09-199	Inspiration	BLM	200	
KRD-09-200	Sheep Mountain	BLM		
KRD-09-202	C Lazy U	BLM	0	
KRD-09-206	McQueary Gulch	BLM	0	
KRD-09-209	Junction Butte	BLM	100	
KRD-09-329	Gore Lakes Fuel Reduction Project	BLM	0	53,460
KRD-09-352	Independence Mtn. Piles	BLM	0	
LJD-09-079	Blanca Wetlands Rx	BLM	0	
MRD-09-141	Dallas Substation	BLM		86,480
MRD-09-197	Highway 90	BLM	241	
MRD-09-207	Powderhorn	BLM	156	
MRD-09-219	Mailbox	BLM	124	
MRD-09-254	Goose Creek/Dutch Gulch	BLM	0	

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
MRD-09-349	Gold Basin Piles	BLM	0	151,544
MUL-09-215	W. Antelope/Red Creek	BLM	25	
RGD-09-009	Arkansas Mountain Fuel Break Piles	BLM	0	
RGD-09-010	Poverty Mtn Piles	BLM	0	
RGD-09-011	Sand Gulch Piles	BLM	0	35,325
RGD-09-027	Lakemoor West	BLM	0	8,543
RGD-09-028	Turkey Gulch Piles	BLM	0	337,142
RGD-09-113	Rosita Piles	BLM	0	16,703
RGD-09-121	Placer Creek Piles	BLM	0	
RGD-09-145	Lakemoor West Broadcast	BLM		
RGD-09-146	Rice Gulch	BLM	1	
RGD-09-188	Arkansas Mt Broadcast	BLM	110	
SJD-09-150	Mesa Pedregosa	BLM	0	
SJD-09-243	Forest Lakes Pile Burn	BLM	0	
SJD-09-246	Dolores Rim	BLM	285	
UPD-09-333	Chaffee	BLM	0	
WRD-09-072	WRFO Russian Olive Pile	BLM		15,930
WRD-09-073	Boies	BLM	15	
WRD-09-075	Carl's Hole Unit 1	BLM	40	
WRD-09-077	Badger Flats	BLM		
WRD-09-115	East Jordan	BLM	1,065	
WRD-09-179	Segar Mountain Rx	BLM	1	
WRD-09-195	Tri State Piles	BLM		32,710
WRD-09-293	Oak Ridge	BLM	230	
WRD-09-324	Freezewall Piles	BLM	0	136,842
BMX-09-307	Witter BMFPD	BMPD	0	6,100
LAW-09-169	Tern Island	CDOW	27	
MOW-09-123	Lower Roubideau Tamarisk Piles	CDOW		
MOW-09-124	Hamilton Tamarisk Piles	CDOW		
MOW-09-144	Escalante Food Plots/Field Burn	CDOW		
PUW-09-252	Bosque Flood	CDOW	0	
BCX-09-290	S-3	City of Boulder	40	
FCX-09-096	Bobcat Ridge Natural Area	City of Ft Collins		
FCX-09-105	Coyote Ridge Natural Area	City of Ft Collins	0	
FCX-09-110	Bobcat Ridge Piles	City of Ft Collins	0	1,360
ALS-09-038	Powder House ALS	CSFS	0	
ALS-09-286	Forbes Park LOA Piles	CSFS	0	16,956
ALS-09-287	Forbes Wagon Creek Piles	CSFS	0	4,009
BOS-09-088	Mountain King	CSFS	0	12,684
BOS-09-089	Upper Sunshine/Lickskillet (Gold Hill)	CSFS		28,060
BOS-09-157	Crescent Meadow	CSFS		
BOS-09-162	Bergen Peak	CSFS	0	
BOS-09-407	Gross Reservoir	CSFS	0	2,423

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
CCS-09-020	Stoney Face Piles Burn	CSFS	0	
CCS-09-021	Table Mountain Pile Burn	CSFS	0	
CCS-09-022	Upper Badger Creek Pile Burn	CSFS	0	
CCS-09-030	3R Pile Burn	CSFS	0	196,137
FCS-09-114	Little Valley	CSFS	0	
FRS-09-083	Goose Creek Piles	CSFS		168,300
FRS-09-302	Lower North Fork	CSFS	0	
GOS-09-059	Cub Creek Pile Unit 6	CSFS	0	30,940
GOS-09-127	Elk Meadow	CSFS		
	White Ranch Park Grass (Units 24-			
GOS-09-167	26)	CSFS	19	
GOS-09-171	Bear Creek Bowl II/Mt Evans SWA	CSFS	80	
GOS-09-227	White Ranch Park Understory	CSFS	37	
GOS-09-247	Staunton SP Pile Unit 4 Flying J Ranch Units	CSFS	0	10,591
GOS-09-331	F,M1,M2,M3,M4	CSFS	0	
GOS-09-332	Staunton State Park	CSFS	45	
GRS-09-311	Fraser Valley Piles	CSFS	0	267,540
SAS-09-319	Homestake Trout Club	CSFS	0	91,440
SSS-09-229	Steamboat and Pearl	CSFS	0	122,488
SSS-09-233	Delaney Buttes	CSFS		
SSS-09-402	CS Forest Piles	CSFS	0	82,935
WPS-09-103	Eleven Mile State Park Rx Burn	CSFS	170	
WPS-09-118	James Mark Jones SWA Rx Burn	CSFS	475	
WPS-09-303	PPWS North Fork Ridge Road	CSFS	0	
WPS-09-327	Salt Creek Piles	CSFS	0	
WRF-09-322	GGCSP Nott Creek Broadcast	CSFS	10	
DOX-09-298	Bayou Gulch	Douglas Co. OS	86	
FCS-09-300	PMN Restoration	FCX	0	
FCS-09-309	CRN Restoration	FCX	0	
FCX-09-308	KFP Restoration	FCX	0	
FCX-09-336	Butterfly Woods	FCX	0	
FCQ-09-176	Fort Carson - Middle	Fort Carson Army	71	
FCQ-09-177	Fort Carson - South	Fort Carson Army	1,009	
FCQ-09-178	Fort Carson - PCMS	Fort Carson Army	11,493	
FCQ-09-193	Fort Carson - North	Fort Carson Army	-	
JEX-09-005	Mount Falcon Slash Piles	JEFFCO	0	43,497
JEX-09-006	White Ranch Slash Piles North	JEFFCO	0	485
LRX-09-002	Carter Lake	Larimer County	0	1,938
LRX-09-003	Horsetooth	Larimer County	0	19,154
LRX-09-128	Indian Creek Phase II	Larimer County		,
LFX-09-154	Lake of the Pines	Left Hand FD		5,700
MUL-09-132	San Juan Public Lands WFU	MULTIPLE		.,

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
MUL-09-175	Yardley Wetlands	MULTIPLE	20	
MUL-09-183	Montrose Interagency Fire Mgt Unit	MULTIPLE		
MUL-09-231	Blacktail	MULTIPLE	0	
MUL-09-273	Upper Colorado River Interagency	MULTIPLE	0	
MUL-09-371	Oak Meadows	MULTIPLE	0	22,638
PSF-09-065	3-4 Elk #2	MULTIPLE		
BCP-09-040	Green Grizzly	NPS	64	
CNID 00 044	CNP Sagebrush Burn Blocks (Ute	NIDC		
CNP-09-041	Mesa)	NPS	0	
FFP-09-099	Florissant Piles	NPS		
GSP-09-348	Liberty RX	NPS	0	
MVP-09-080	Chapin Pile Rx	NPS		3,663
MVP-09-186	Morefield Pile Rx	NPS		1,683
MVP-09-264	Entrance Area Rx	NPS	35	
MVP-09-283	Chapin Mesa Exotics Rx	NPS	12	
MVP-09-328	Farview Rx	NPS	2	
RMP-09-063	Glacier Basin Area Piles	NPS		308,204
RMP-09-097	Grand Lake Boundary Piles 2009	NPS		
RMP-09-098	Pontiac Pit	NPS		75,525
RMP-09-100	Deer Mountain Piles	NPS		4,800
RMP-09-163	Timber Creek Slash Disposal Burn	NPS	0	
RMP-09-259	Horseshoe	NPS	3	
RMP-09-276	Timber Creek Campground Pile Burn	NPS	0	14,106
RMP-09-280	Rocky Mountain National Park	NPS	0	
RMP-09-282	Beaver Meadows 09	NPS	150	
RMP-09-285	South Lateral Moraine	NPS	0	
RMP-09-335	Moraine Park Administrative Site	NPS	0	13,784
RMP-09-339	Betty Dicks Slash Disposal Burn	NPS	0	
RMP-09-340	Kaley Cottages	NPS	0	5,096
JWX-09-068	Yegge Road Shaded Fuelbreak	OTHER	0	75,624
PLX-09-299	Platte Canyon Piles	OTHER	0	24,794
PVT-09-017	Placer Creek Watershed	OTHER	0	2,906,250
PVT-09-018	Ute Creek Watershed	OTHER	0	800,000
PVT-09-039	Cal-Wood	OTHER	0	2,183
PVT-09-047	Shooting Star Ranch	OTHER		12,742
PVT-09-053	Magic Sky Ranch	OTHER		
PVT-09-069	BVR 2009	OTHER		843,212
PVT-09-084	Red Tail Ranch	OTHER	0	163,713
PVT-09-104	Wolf Creek Ski Area	OTHER		1,926
PVT-09-106	Discovery Hill	OTHER	0	53,723
PVT-09-116	wwv	OTHER	50	
PVT-09-117	Grand River Piles	OTHER	0	712,857
PVT-09-122	Ponderosa Trail	OTHER	0	

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
PVT-09-125	Buck Mountain	OTHER	70	
PVT-09-126	Trinchera Ranch Wilkens	OTHER		
PVT-09-136	Banded Peak Ranch Broadcast	OTHER		
PVT-09-137	Banded Peak Ranch Piles	OTHER		18,000
PVT-09-147	Maryland Creek Ranch	OTHER	0	
PVT-09-149	Blue Valley Ranch Broadcast	OTHER	22	
PVT-09-155	Crystal Lakes Road & Rec Association	OTHER		140,340
PVT-09-156	Bar-K	OTHER	0	40,997
PVT-09-226	Stagecoach Ski Area	OTHER	0	58,795
PVT-09-237	Keystone Mountain	OTHER		107,310
PVT-09-251	Pearl Creek Piles	OTHER	0	
PVT-09-258	Mt. Powell Ranch	OTHER	0	1,061
PVT-09-265	Bar NI Unit 2	OTHER	62	
PVT-09-270	Diehl Huckleberry Burn	OTHER	0	103
PVT-09-271	Petrie Pile	OTHER	0	
PVT-09-274	Winter Park Resort	OTHER	0	192,510
PVT-09-275	Copper Mountain - 4/7 Glade 09	OTHER	0	1,279
PVT-09-277	Arapahoe Basin Ski Area	OTHER	0	540
PVT-09-294	Phantom Canyon Preserve: East Side	OTHER	4	
PVT-09-297	Bar NI Unit 3	OTHER	0	
PVT-09-346	Christiansen Lightning Ridge	OTHER	0	16,414
PVT-09-350	Canady Mt Elim Bible Camp	OTHER	0	
PVT-09-365	Deer Trail LLC	OTHER	0	2,997
PVT-09-373	Cooney - Dry Gulch Placer	OTHER	0	
PVT-09-374	CD Johnson	OTHER	0	53,095
PVT-09-382	Jones Forest	OTHER	0	14,400
PVT-09-383	Storm Mountain Ranch	OTHER	0	12,000
PVT-09-384	Ax Property Slash Burn	OTHER	0	15,199
PVT-09-393	Knox	OTHER	0	
PVT-09-396	Morrison Creek Ranch	OTHER	0	38,000
PVT-09-404	Sosebee Logging Piles	OTHER	0	50,313
ARF-09-004	Love Property	USFS	0	
ARF-09-012	Sugarloaf F5 & 167	USFS	0	
ARF-09-013	Porter Ranch Units 11, 12, 13	USFS	0	
ARF-09-014	Evergreen 6B	USFS	0	215,230
ARF-09-015	Sugarloaf 165 A & B	USFS	0	3,168
ARF-09-016	Tungsten-Beaver Unit 2	USFS	0	
ARF-09-031	Elkhorn-Manhattan Piles	USFS	0	601,920
ARF-09-036	Columbine Unit T	USFS	0	10,557
ARF-09-076	Sugarloaf 27 Ruby	USFS	0	10,986
ARF-09-090	Sand Creek Piles	USFS	0	3,171
ARF-09-091	Estes Valley Piles-East	USFS	0	467,408
ARF-09-092	Estes Valley Piles-North	USFS		3,730

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
ARF-09-093	Estes Valley_Piles-West	USFS	0	910,281
ARF-09-094	Crystal Lakes Piles	USFS		141,982
ARF-09-108	Pingree Hill/Lonetree Piles	USFS		225,534
ARF-09-109	Sugarloaf 109, 110W, F1	USFS	0	428,442
ARF-09-148	West Stringtown Piles	USFS		76,746
ARF-09-160	Pawnee 2009	USFS	3,078	
ARF-09-208	James Creek Units H1401 & RFB14	USFS	0	67,554
ARF-09-217	Blue Ridge	USFS	0	
ARF-09-225	Pratt Creeek/Deadhorse Piles	USFS	0	49,468
ARF-09-232	A-Bay Temp Storage	USFS		14,925
ARF-09-240	Scanlock	USFS		
ARF-09-241	ANRA Landings	USFS		
ARF-09-257	Denver Creek	USFS	0	9,000
ARF-09-272	Sheep Creek 2	USFS	661	
ARF-09-341	Blue Ridge South Piles	USFS	0	
ARF-09-342	Blue Ridge North Piles	USFS	0	
ARF-09-343	Upper Fraser Piles	USFS	0	12,312
ARF-09-344	Vasquez Ridge	USFS	0	1,244,828
ARF-09-366	Meadow Creek Reservoir	USFS	0	, ,
ARF-09-367	South Fork	USFS	0	3,510
ARF-09-394	Sugarloaf 132 & 132 E	USFS	0	,
ARF-09-397	Porter Ranch Unit 5	USFS	0	
ARF-09-398	Sugarloaf 166	USFS	0	
ARF-09-406	Shadow Mountain Village Piles	USFS	0	727
GMF-09-129	Tomichi	USFS	492	
GMF-09-130	One Mile	USFS	_	
GMF-09-131	Taylor Canyon	USFS	102	
GMF-09-164	Los Pinos	USFS	1,117	
GMF-09-172	Alpine	USFS	,	
GMF-09-173	West Elk	USFS	15	
GMF-09-174	Ohio City-Pitkin	USFS	_	
GMF-09-180	Davewood	USFS	492	
GMF-09-181	Divide CG & Raspberry Piles	USFS	72	5,508
GMF-09-182	Escalante	USFS		-,
GMF-09-187	Yellow Pine	USFS	367	
GMF-09-189	Bear Paw	USFS	132	
GMF-09-194	WAPA/Tri-State Clearcuts Broadcast	USFS	32	
GMF-09-201	Sims Mesa	USFS		
GMF-09-216	Columbine Wildlife Oak Burn	USFS	865	
GMF-09-218	Patterson Mountain/Dry Park	USFS		
GMF-09-223	Horse Pasture Pit	USFS		
GMF-09-260	Grand Junction Watershed (Units 1-9)	USFS	0	

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
GMF-09-262	Mesa Lake Piles	USFS	0	39,200
GMF-09-263	Ward Lake Piles	USFS	0	244,608
GMF-09-288	Pine Mountain	USFS	0	
GMF-09-306	Pine Mountain	USFS	0	
GMF-09-310	Reade Hill	USFS	0	
GMF-09-312	Battlements Sudden Aspen Decline	USFS	0	
GMF-09-320	Little Monitor	USFS	0	
GMF-09-351	Yellow Pine Piles	USFS	0	22,608
GMF-09-358	Ridgestock Timber Sale	USFS	0	75,976
GMF-09-362	Old Monarch Piles	USFS	0	81,794
GMF-09-369	Stagestop TS	USFS	0	6,643
GMF-09-377	Kannah Creek Piles	USFS	0	67,473
GMF-09-378	Lorrain Gulch	USFS	0	145,059
MLF-09-356	Buckeye Unit (Carpenter Ridge)	USFS	0	
PSF-09-001	Wagon Tongue South Piles	USFS	0	
PSF-09-023	Timpas Swing	USFS	0	
PSF-09-024	Highway 67	USFS	0	184,732
PSF-09-029	Comanche - Las Animas	USFS	0	
PSF-09-032	Dell Gulch Meadow	USFS	0	
PSF-09-035	Woodland Park Piles	USFS	0	
PSF-09-037	Comanche - Baca	USFS	1,063	
PSF-09-042	Howard 1, 08 TSI	USFS	0	50,271
PSF-09-051	Sleeping Tom Summer Home Group	USFS	0	
PSF-09-052	Road 251 Thinning	USFS	0	
PSF-09-056	Platte River Piles	USFS		3,912
PSF-09-057	Bear Mountain Piles	USFS	0	
PSF-09-058	Bennett Mountain Piles	USFS	0	
PSF-09-060	Buffalo Jones TS	USFS	0	
PSF-09-061	Rim Rock Piles	USFS	0	
PSF-09-062	Painted Rocks	USFS	0	
PSF-09-064	Monument Piles	USFS		17,892
PSF-09-066	Unit 121 (Gametrail)	USFS		
PSF-09-067	Ranch of the Rockies	USFS		
PSF-09-078	Shaded Fuel Break 550 Road	USFS		18,450
PSF-09-081	Kelsey	USFS		
PSF-09-082	Bear Mountain Broadcast	USFS		
PSF-09-085	Miller Gulch	USFS	6	
PSF-09-086	Trumbull Broadcast	USFS		
PSF-09-087	Noddles	USFS		
PSF-09-101	Weldon	USFS		
PSF-09-102	Squaw Creek	USFS		
PSF-09-134	Black Mtn Piles	USFS		75,572
PSF-09-135	Meadow Divide Timber Sale Piles	USFS		

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
PSF-09-140	Black Mountain Fire Restoration	USFS	1,014	
PSF-09-158	Trumbull Piles	USFS		3,051
PSF-09-168	Road Gulch	USFS		
PSF-09-170	Fishcreek P1	USFS	0	
PSF-09-256	Trout West	USFS	200	
PSF-09-267	Threemile Creek	USFS	720	
PSF-09-301	Sky Island	USFS	0	
PSF-09-304	Wagon Tongue Broadcast P1-3	USFS	0	
PSF-09-330	Twin Lakes	USFS	50	
PSF-09-334	Limestone Ridge	USFS	140	
PSF-09-337	Poverty Mountain Broadcast	USFS	0	
PSF-09-338	PWC Piles	USFS	0	
PSF-09-353	O'Haver Lake	USFS	0	
PSF-09-363	Chalk Creek Piles	USFS	0	25,840
PSF-09-364	Howard 1 ARRA	USFS	0	120,650
PSF-09-368	Rampart Piles	USFS	0	
PSF-09-379	Lodgepole Flats	USFS	0	2,869
PSF-09-380	Leadville National Fish Hatchery	USFS	0	1,194
PSF-09-385	Frenchman Creek	USFS	0	
PSF-09-386	North Cottonwood Piles	USFS	0	
PSF-09-387	NW Leadville	USFS	0	
PSF-09-388	Browns Creek	USFS	0	
PSF-09-392	Horn Creek & Alvarado Piles	USFS	0	11,216
PSF-09-395	Messenger ARRA Stewardship	USFS	0	
PSF-09-401	Rocky Gulch Stewardship Contract	USFS	0	
RGF-09-185	Embargo PP Rx Units 4, 5, 6)	USFS	190	
RGF-09-190	Powderhouse Unit 2	USFS		
RGF-09-191	English Valley Rx (Units 1-4)	USFS	0	
RGF-09-192	Powderhouse 1a (Piles)	USFS		1,080
RGF-09-314	Mill Creek	USFS	300	
RGF-09-316	November	USFS	0	
RGF-09-354	Finger Mesa Piles	USFS	0	2,400
RGF-09-359	Grouse Timber Pile Burn	USFS	0	3,675
RGF-09-375	Twister-Twister II Piles	USFS	0	
RGF-09-376	Burro-B <mark>l</mark> owout Piles	USFS	0	
RTF-09-043	Buffalo Pass Admin Pile	USFS	0	
RTF-09-044	Rabbit Ears Pass Admin Pile	USFS	0	127,251
RTF-09-045	Big Creek Fuels Pile Burn	USFS	0	
RTF-09-046	Grizzly Pile Burn	USFS	0	
RTF-09-054	Green Ridge Timber Sale Pile Burn	USFS		712,555
RTF-09-055	Long Park Pile Burn	USFS	0	402,933
RTF-09-253	Indian Run	USFS	0	
RTF-09-268	Big Creek Fuels RX Burn	USFS	0	

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
RTF-09-278	Gore Lakes Pile Burn	USFS	0	203,596
RTF-09-284	Gore Pass Administrative Site	USFS	0	1,800
RTF-09-289	Seedhouse Pile Burn	USFS	0	52,079
RTF-09-313	Seedhouse Broadcast Burn	USFS	0	
SJF-09-019	East Animas Piles	USFS	0	143
SJF-09-025	Junction Creek Piles	USFS	0	
SJF-09-026	Hidden Valley Piles	USFS	0	
SJF-09-119	Chimney Rock Piles	USFS		
SJF-09-120	Ute Campground	USFS	_	6,652
SJF-09-143	Chicken Creek	USFS	0	32,006
SJF-09-151	Burns Canyon	USFS	110	
SJF-09-152	Vigil & Abeyta Mesas	USFS	341	
SJF-09-153	Devil Creek	USFS	438	
SJF-09-159 SJF-09-184	Piedra Aerial - Sheep_Creek	USFS	1,085	
SJF-09-184 SJF-09-204	Doe Canyon Trimble Point	USFS		
SJF-09-210	Upper Dolores South	USFS	0	
	South Carver Piles		- 1	6 100
SJF-09-211		USFS	0	6,188
SJF-09-212	Trail Canyon Broadcast	USFS	0	
SJF-09-213	House Creek Rim & Horsecamp	USFS	0	
SJF-09-224	South Carver Broadcast	USFS	0	
SJF-09-236	Electra Lakes	USFS	0	477,619
SJF-09-255	Hayden Creek	USFS	0	
SJF-09-269	Pine Point Campground Piles	USFS	0	
SJF-09-279	First Notch Units A & B	USFS	231	
SJF-09-281	Rabbitt Mountain Piles	USFS	0	
SJF-09-291	Burns Canyons Piles	USFS	0	
SJF-09-292	Ute Fuels Reduction	USFS	0	
SJF-09-323	Upper Piedra	USFS	0	1,760
SJF-09-325	East Fork CG	USFS	0	
SJF-09-326	Chub Draw	USFS	0	
SJF-09-360	East Fork Campground	USFS	0	
SJF-09-405	Carlisle/Trimble Points	USFS	0	7,875
WRF-09-007	East Vail	USFS	0	373,741
WRF-09-008	West Vail	USFS	0	79,945
WRF-09-161	Coulter Mesa Burn Block	USFS	987	, 5,5 .5
WRF-09-165	Gold Hill	USFS	307	70,272
WRF-09-166	Peak 1 CG	USFS		84,825
WRF-09-203	County Commons	USFS		5,655
			-	3,033
WRF-09-205	Eagles Nest	USFS	74.2	
WRF-09-214	Eagle Burn Blocks - Dewey Park Rx	USFS	712	

Permit Number	Burn Name	Agency Group	Acres Burned	Ft <sup>3</sup> of Piles Consumed
WRF-09-228	Mesa Cortina	USFS		
WRF-09-261	Eagle Burn Blocks - Sweetwater Rx	USFS	784	
WRF-09-315	French Creek Grass	USFS	0	
WRF-09-317	Chapman Piles	USFS	0	10,602
WRF-09-318	Ripple Creek Piles	USFS	0	12,060
WRF-09-321	Redstone Campground	USFS	0	81,000
WRF-09-345	Ute Creek	USFS	0	3,582
WRF-09-355	Gold Park Campground Piles	USFS	0	3,767
WRF-09-357	Frisco WUI	USFS	0	
WRF-09-361	East Fork WRF Piles	USFS	0	3,587
WRF-09-370	Meadow Lake	USFS	0	
WRF-09-372	Flagpole	USFS	0	9,844
WRF-09-389	Yoder	USFS	0	6,384
WRF-09-390	Ryan Gulch	USFS	0	
WRF-09-391	Piney River Ranch	USFS	0	23,109
WRF-09-399	Gravel Pit	USFS	0	
WRF-09-400	Jasper Piles	USFS	0	6,300
ALR-09-138	Unit P	USFWS	630	
ALR-09-139	Unit C2	USFWS	544	
ALR-09-295	Alamosa Refuge Unit R/S	USFWS	0	
ARR-09-296	Anderson	USFWS	0	
BPR-09-074	Brown's Park Piles	USFWS		25,600
BPR-09-234	Spitzie	USFWS		
BPR-09-235	Hog Lake	USFWS	0	
RMR-09-070	Arsenal Broadcast Burns	USFWS	]	
RMR-09-071	Arsenal Piles	USFWS		2,784
WEX-09-107	Green Mountain Units 2, 3, 4, 5	WMFD	]	
WEX-09-347	Ken Caryl - North Hogback North	WMFD	0	