



SHEEP CREEK - Miner Paradise Complex Incident Decision

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1. Decision

1.1. Decision Summary

Decision Information

NAME	VALUE
Published	08/30/2013 16:14 CDT
Estimated Cost	\$9,500,000
Incident Owner (s)	Anna Anderson, Ashley Sites, Barbara Ping, Frederick Jones, Greg Juvan, Teri Seth, Michael Gagen, JULIE SHEA, Todd Opperman, Timothy Brickell, Scott Schuster, Steven Miranda
Editor(s)	Lisa Stoeffler, Pam Gardner, Tonja Opperman
Reviewer(s)	Steven Miranda, Scott Schuster
Approver(s)	Pam Gardner
Natl Preparedness Level	4

Decision History

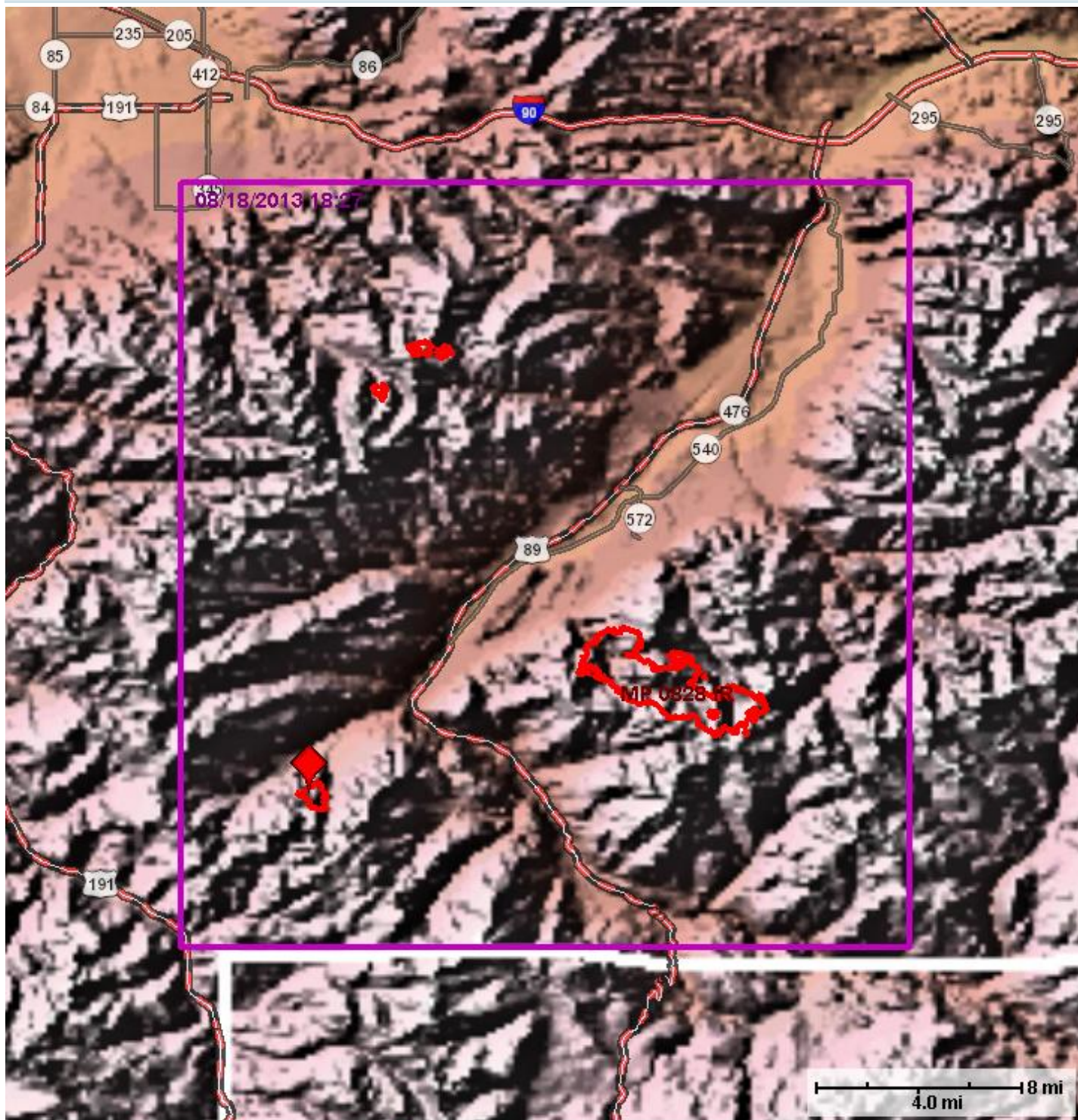
Editor Name	Action	Date (CDT)	Comment
Gardner, Pam	Published	08/30/2013 16:14	
Gardner, Pam	Approved	08/30/2013 16:14	
Schuster, Scott	Accepted	08/30/2013 15:21	
SHEA, JULIE	Review Requested	08/30/2013 15:01	
SHEA, JULIE	Review Requested	08/30/2013 15:00	
SHEA, JULIE	Created	08/30/2013 14:49	

1.2. Assessment

1.2.1. Incident Information

Incident Information

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Unique Fire Identifier	2013-MTGNF-000098
Responsible Unit Name	Gallatin National Forest
FireCode	P1HVZ4
Incident Size	11,612 acres
Incident Cause	Natural
Incident Discovery	08/12/2013 09:07
Contained	
Controlled	
Out	
Jurisdictional Unit	MTGNF - Gallatin National Forest
Jurisdictional Agency(s)	BLM, NPS, USFS
Geographic Area	Northern Rockies
Point of Origin	45.1226 N / 110.9829 W
Owner Name(s)	Anna Anderson, Ashley Sites, Barbara Ping, Frederick Jones, Greg Juvan, Teri Seth, Michael Gagen, JULIE SHEA, Todd Opperman, Timothy Brickell, Scott Schuster, Steven Miranda



— Fire Perimeters — Planning Areas ◆ Point of Origin

1.2.2. Weather

Fire Weather Zone Forecast

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FNUS55 KTFX 301031
FWFTFX

FIRE WEATHER PLANNING FORECAST FOR NORTH CENTRAL MONTANA
NATIONAL WEATHER SERVICE GREAT FALLS MT
431 AM MDT FRI AUG 30 2013

...RED FLAG WARNING FROM NOON MDT TO 9 PM MDT TODAY FOR GUSTY
WINDS AND LOW HUMIDITIES FOR PORTIONS OF SOUTHWEST MONTANA...

.DISCUSSION...
GUSTY WINDS WILL OCCUR TODAY IN THE WAKE OF LAST NIGHTS COLD
FRONT. THIS COMBINED WITH LOW RELATIVE HUMIDITIES OVER SOUTHWEST
MONTANA WILL RESULT IN CRITICAL FIRE WEATHER CONDITIONS IN THAT
AREA. A CANADIAN WEATHER SYSTEM WILL BRING COOLER AIR SATURDAY BUT
NO PRECIPITATION. WINDS WILL BE LIGHTER THAN THOSE OF TODAY WITH
THE EXCEPTION OF FERGUS AND BLAINE COUNTIES.

MTZ118-302230-
HELENA AND TOWNSEND RANGER DISTRICTS OF THE HELENA NATIONAL
FOREST-
431 AM MDT FRI AUG 30 2013

...RED FLAG WARNING IN EFFECT FROM NOON TODAY TO 9 PM MDT THIS
EVENING FOR GUSTY WINDS AND LOW HUMIDITIES...

.TODAY...
* SKY/WEATHER.....MOSTLY SUNNY.
* MAX TEMPERATURE.....81-89...72-80 HIGHER ELEVATIONS.
* 24 HR TREND.....1 DEGREE UP...4 DEGREES DOWN HIGHER ELEVATIONS.
* MIN HUMIDITY.....16-26 PERCENT.
* 24 HR TREND.....8 PERCENT DOWN...1 PERCENT DOWN HIGHER
ELEVATIONS.
* WIND (20 FT).
* LOWER ELEVATION...SOUTHWEST WINDS UP TO 5 MPH SHIFTING TO THE
WEST 5 TO 15 MPH IN THE AFTERNOON.
* RIDGES.....SOUTHWEST WINDS UP TO 5 MPH INCREASING TO WEST
10 TO 15 MPH IN THE AFTERNOON.
* LAL.....1.
* CWR.....0 PERCENT.
* HIGH LEVEL HAINES.....3 VERY LOW.

.TONIGHT...
* SKY/WEATHER.....MOSTLY CLEAR.
* MIN TEMPERATURE.....47-54.
* 24 HR TREND.....8 DEGREES DOWN.
* MAX HUMIDITY.....62-72 PERCENT.
* 24 HR TREND.....5 PERCENT DOWN...3 PERCENT UP HIGHER
ELEVATIONS.
* WIND (20 FT).
* LOWER ELEVATION...WEST WINDS 5 TO 15 MPH.
* RIDGES.....NORTHWEST WINDS 5 TO 15 MPH.
* LAL.....1.
* CWR.....0 PERCENT.
* HIGH LEVEL HAINES.....3 VERY LOW.

.SATURDAY...
* SKY/WEATHER.....SUNNY.
* MAX TEMPERATURE.....74-82...65-73 HIGHER ELEVATIONS.
* 24 HR TREND.....7 DEGREES DOWN.
* MIN HUMIDITY.....20-25 PERCENT...24-34 PERCENT HIGHER
ELEVATIONS.
* 24 HR TREND.....5 PERCENT UP.
* WIND (20 FT).
* LOWER ELEVATION...NORTHWEST WINDS UP TO 5 MPH.
* RIDGES.....NORTHWEST WINDS UP TO 10 MPH.
* LAL.....1.
* CWR.....0 PERCENT.
* HIGH LEVEL HAINES.....2 VERY LOW.

.FORECAST DAYS 3 THROUGH 7.....
.SUNDAY...CLEAR. LOWS IN THE UPPER 40S. HIGHS IN THE MID 80S.
SOUTHEAST WINDS AROUND 5 MPH.
.LABOR DAY...PARTLY CLOUDY. SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. LOWS IN THE LOWER 50S. HIGHS IN THE MID 80S. SOUTH
WINDS AROUND 5 MPH.
.TUESDAY...PARTLY CLOUDY. SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. LOWS IN THE LOWER 50S. HIGHS IN THE LOWER 80S.
SOUTHWEST WINDS AROUND 5 MPH.
.WEDNESDAY...PARTLY CLOUDY. SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. LOWS IN THE LOWER 50S. HIGHS IN THE LOWER 80S.

Fire Weather Zone Forecast

.THURSDAY...PARTLY CLOUDY, SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS. LOWS IN THE LOWER 50S. HIGHS IN THE LOWER 80S.

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WEATHER.GOV/GREATFALLS

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FNUS55 KBYZ 301540
FWFBYZ

FIRE WEATHER PLANNING FORECAST FOR SCEN AND SERM MONTANA
NATIONAL WEATHER SERVICE BILLINGS MT
940 AM MDT FRI AUG 30 2013

...RED FLAG WARNING IN EFFECT UNTIL 9 PM MDT THIS EVENING FOR PORTIONS OF SOUTH CENTRAL MONTANA...

.DISCUSSION...
UPDATED THE FIRE ZONES THIS MORNING TO REMOVE SHOWERS AND THUNDERSTORMS. STORMS ARE NOT EXPECTED TO DEVELOP UNTIL THIS AFTERNOON AHEAD OF A COLD FRONT MOVING THROUGH THE AREA. RED FLAG WARNING FOR FIRE ZONE 123 REMAINS IN EFFECT. RICHMOND

PREVIOUS DISCUSSION...
TEMPERATURES WILL BE WELL ABOVE NORMAL ONCE AGAIN TODAY AS HIGHS REACH THE 90S OVER MOST OF THE AREA. HUMIDITIES WILL FALL INTO THE TEENS MOST LOCATIONS AS WELL. WEST WINDS WILL INCREASE OVER FIRE WEATHER ZONE 123 AND BE GUSTY NEAR RIDGE TOP LEVEL. WILL MAINTAIN RED FLAG WARNING FOR THOSE CONDITIONS. A COLD FRONT WILL PUSH THROUGH THE ENTIRE AREA TONIGHT AND PROVIDE A COOLER DAY FOR SATURDAY. NORTHWEST WINDS WILL BE GUSTY OVER THE EAST ON SATURDAY BUT HUMIDITIES SHOULD BE IN THE 20S WITH HIGHS BEING HELD IN THE LOWER 80S. TWH

MTZ123-302145-
GALLATIN NATIONAL FOREST-
940 AM MDT FRI AUG 30 2013

...RED FLAG WARNING IN EFFECT UNTIL 9 PM MDT THIS EVENING...

.REST OF TODAY...
* SKY/WEATHER.....MOSTLY SUNNY.
* MAX TEMPERATURE.....79-89 AT 5000 FEET...72-82 AT 7000 FEET.
* 24 HR TREND.....1 DEGREE WARMER.
* MIN HUMIDITY.....15-25 PERCENT AT 5000 FEET...19-29 PERCENT AT 7000 FEET.
* 24 HR TREND.....5 PERCENT DRIER.
* WIND (20 FT)
* SLOPE/VALLEY.....WEST WINDS 10 TO 20 MPH. GUSTS UP TO 30 MPH IN THE AFTERNOON.
* RIDGETOP.....WEST 15 TO 30 MPH.
* LAL.....1...NO THUNDERSTORMS.
* CWR.....ZERO.
* HAINES INDEX.....4.

.TONIGHT...
* SKY/WEATHER.....PARTLY CLOUDY. ISOLATED SHOWERS AND THUNDERSTORMS IN THE EVENING.
* MIN TEMPERATURE.....46-56 AT 5000 FEET...42-52 AT 7000 FEET.
* 24 HR TREND.....5 DEGREES COOLER.
* MAX HUMIDITY.....64-74 PERCENT AT 5000 FEET...74-84 PERCENT AT 7000 FEET.
* 24 HR TREND.....5 PERCENT WETTER.
* WIND (20 FT)
* SLOPE/VALLEY.....WEST WINDS 5 TO 15 MPH.
* RIDGETOP.....NORTHWEST 10 TO 20 MPH.
* LAL.....2...1 TO 8 STRIKES/15 MIN/CELL.
* CWR.....10 PERCENT.
* HAINES INDEX.....4.

.SATURDAY...
* SKY/WEATHER.....SUNNY.
* MAX TEMPERATURE.....75-84 AT 5000 FEET...65-75 AT 7000 FEET.
* 24 HR TREND.....6 DEGREES COOLER.
* MIN HUMIDITY.....16-25 PERCENT AT 5000 FEET...21-31 PERCENT AT 7000 FEET.
* 24 HR TREND.....4 PERCENT WETTER.
* WIND (20 FT)
* SLOPE/VALLEY.....NORTHWEST WINDS 5 TO 10 MPH.
* RIDGETOP.....WEST 15 TO 25 MPH.
* LAL.....1...NO THUNDERSTORMS.

Fire Weather Zone Forecast

* CWR.....ZERO.
* HAINES INDEX.....2.

.FORECAST DAYS 3 THROUGH 7.....
.SATURDAY NIGHT...CLEAR. LOWS 43 TO 49. EAST WINDS 5 TO 15 MPH.
.SUNDAY...CLEAR. LOWS 45 TO 55. HIGHS 81 TO 90. SOUTHEAST WINDS
5 TO 10 MPH.
.MONDAY...PARTLY CLOUDY. ISOLATED SHOWERS AND THUNDERSTORMS. LOWS
49 TO 59. HIGHS 82 TO 92. SOUTH WINDS 5 TO 10 MPH.
.TUESDAY...PARTLY CLOUDY. ISOLATED SHOWERS AND THUNDERSTORMS.
LOWS 49 TO 59. HIGHS 82 TO 92. SOUTHWEST WINDS 5 TO 10 MPH.
.WEDNESDAY...MOSTLY CLOUDY. SCATTERED SHOWERS AND THUNDERSTORMS.
LOWS 49 TO 59. HIGHS 78 TO 88.
.THURSDAY...MOSTLY SUNNY. ISOLATED SHOWERS AND THUNDERSTORMS.
HIGHS 79 TO 89.

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WEATHER.GOV/BILLINGS

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FNUS55 KRIW 300822
FWFRIW

FIRE WEATHER PLANNING FORECAST FOR WESTERN AND CENTRAL WYOMING
NATIONAL WEATHER SERVICE RIVERTON WY
222 AM MDT FRI AUG 30 2013

.DISCUSSION...

...YELLOWSTONE NP AND TETON DISPATCH AREAS (INCLUDES FIRE WEATHER
ZONES 140...414...415...AND 416)...

A FINAL COMBINATION OF UPPER LEVEL DISTURBANCES WILL BRUSH OVER THE
DISPATCH ZONES THIS AFTERNOON AND EVENING...KEEPING CHANCES FOR
ISOLATED TO WIDELY SCATTERED SHOWERS AND THUNDERSTORMS THROUGH THE
EVENING IN MOST ZONES. HIGH TEMPERATURES WILL BE ON PAR WITH THOSE
ON THURSDAY. WINDS WILL RUN OUT OF THE WEST TO SOUTHWEST TODAY AND
BE QUITE GUSTY AT TIMES THIS AFTERNOON AND EVENING...WITH GUSTS
RANGING BETWEEN 20 AND 25 MPH. ADDITIONALLY...QUICK MOVING
THUNDERSTORMS COULD CAUSE WINDS TO GUST AS HIGH AS 35 TO 50 MPH FOR
BRIEF PERIODS. ALSO...SMALL HAIL LESS THAN A QUARTER OF AN INCH WILL
ALSO POSSIBLE AGAIN TODAY. SATURDAY...HIGH TEMPERATURES WILL DROP
SOME 5 TO 8 DEGREES OVER THOSE ON FRIDAY WHILE MINIMUM RH VALUES
WILL ALSO DROP 5 TO 10 PERCENT. WINDS WILL NOT BE QUITE AS STRONG ON
SATURDAY...EXCEPT NEAR RIDGE TOPS...BUT WILL STILL BE ABLE TO GUST
TO NEAR 20 MPH AT TIMES...HIGHER ACROSS RIDGE-LINES. NO PRECIPITATION
IS EXPECTED THROUGH THE WEEKEND.

...RAWLINS DISPATCH AREA (INCLUDES FIRE WEATHER ZONES 277...278...
AND 279)...

A FINAL COMBINATION OF UPPER LEVEL DISTURBANCES WILL BRUSH OVER THE
DISPATCH ZONES THIS AFTERNOON AND EVENING...KEEPING CHANCES FOR
ISOLATED TO WIDELY SCATTERED SHOWERS AND THUNDERSTORMS THROUGH THE
EVENING IN MOST ZONES. HIGH TEMPERATURES WILL BE ON PAR WITH THOSE
ON THURSDAY. WINDS WILL RUN OUT OF THE WEST TO SOUTHWEST TODAY AND
BE QUITE GUSTY AT TIMES THIS AFTERNOON AND EVENING...WITH GUSTS
RANGING BETWEEN TO AROUND 20 MPH. ADDITIONALLY...RATHER QUICK MOVING
THUNDERSTORMS COULD CAUSE WINDS TO GUST AS HIGH AS 30 TO 40 MPH FOR
BRIEF PERIODS. SATURDAY...HIGH TEMPERATURES WILL DROP SOME 5 DEGREES
OVER THOSE ON FRIDAY WHILE MINIMUM RH VALUES REMAIN THE ABOUT THE
SAME ACROSS ZONE 279...WHILE DROPPING SOME 5 TO 10 PERCENT OVER
ZONES 277 AND 278. WINDS WILL TEND OUT OF THE WEST AND RUN A COUPLE
OF MPH FASTER...GUSTING TO AROUND 20 MPH AT TIMES...HIGHER ACROSS
ANY RIDGE-LINES. EXCEPT FOR AREAS IN ZONE 279 NEAR THE COLORADO
BORDER ON SATURDAY...NO PRECIPITATION IS EXPECTED THROUGH THE WEEKEND.

...CODY DISPATCH AREA (INCLUDES FIRE WEATHER ZONES
275...276...282...283...285...286...287...288...AND 289)...

A FINAL COMBINATION OF UPPER LEVEL DISTURBANCES WILL BRUSH OVER THE
DISPATCH ZONES THIS AFTERNOON AND EVENING...KEEPING CHANCES FOR
ISOLATED TO WIDELY SCATTERED SHOWERS AND THUNDERSTORMS THROUGH THE
EVENING IN MOST ZONES. HIGH TEMPERATURES WILL BE ON PAR WITH THOSE
ON THURSDAY. WINDS WILL RUN OUT OF THE WEST TO NORTHWEST TODAY AND
BE QUITE GUSTY AT TIMES THIS AFTERNOON AND EVENING...WITH GUSTS
RANGING BETWEEN 20 AND 25 MPH IN ZONES 276 AND 286.
ADDITIONALLY...QUICK MOVING THUNDERSTORMS COULD CAUSE WINDS TO GUST
AS HIGH AS 35 TO 50 MPH FOR BRIEF PERIODS. ALSO...SMALL HAIL LESS
THAN A QUARTER OF AN INCH WILL ALSO POSSIBLE AGAIN TODAY IN AND NEAR
THE MOUNTAINS. SATURDAY...HIGH TEMPERATURES WILL DROP SOME 6 TO 12
DEGREES OVER THOSE ON FRIDAY WHILE MINIMUM RH VALUES RISE 5 PERCENT

Fire Weather Zone Forecast

ACROSS THE BASIN ZONES...BUT DROP SOME 10 TO 15 PERCENT IN THE WESTERN MOUNTAINS. WINDS WILL NOT BE AS STRONG ON SATURDAY...EXCEPT NEAR RIDGE TOPS...BUT WILL STILL BE ABLE TO GUST TO NEAR 20 MPH ACROSS THE HIGHER ELEVATIONS. NO PRECIPITATION IS EXPECTED THROUGH THE WEEKEND.

...CASPER DISPATCH AREA (INCLUDES FIRE WEATHER ZONES 280...281... 285...289...AND 300)...

A FINAL COMBINATION OF UPPER LEVEL DISTURBANCES WILL BRUSH OVER THE DISPATCH ZONES THIS AFTERNOON AND EVENING...KEEPING CHANCES FOR ISOLATED TO WIDELY SCATTERED SHOWERS AND THUNDERSTORMS THROUGH THE EVENING IN MOST ZONES. HIGH TEMPERATURES WILL BE ON PAR WITH THOSE ON THURSDAY. WINDS WILL RUN OUT OF THE WEST TO NORTHWEST TODAY AND BE QUITE GUSTY AT TIMES THIS AFTERNOON AND EVENING...WITH GUSTS RANGING BETWEEN 20 AND 25 MPH. ADDITIONALLY...THUNDERSTORMS COULD CAUSE WINDS TO GUST AS HIGH AS 30 TO 40 MPH FOR BRIEF PERIODS. SATURDAY...HIGH TEMPERATURES WILL DROP SOME 5 TO 15 DEGREES OVER THOSE ON FRIDAY WHILE MINIMUM RH VALUES RISE 5 TO 10 PERCENT. WINDS WILL TEND OUT OF THE NORTH TO NORTHEAST AND RUN A FEW MPH FASTER...GUSTING TO 25 MPH AT TIMES...ESPECIALLY IN ZONES 280 AND 281. NO PRECIPITATION IS EXPECTED THROUGH THE WEEKEND.

...THUNDERSTORMS IMPLY STRONG GUSTY AND ERRATIC WINDS...
...HAINES INDEX IS HIGH LEVEL HAINES BOTH DAY AND NIGHT...

WYZ140-302215-
YELLOWSTONE NATIONAL PARK-
INCLUDING...LAKE...MAMMOTH...OLD FAITHFUL
222 AM MDT FRI AUG 30 2013

.TODAY...
SKY/WEATHER.....MOSTLY SUNNY UNTIL 1200...THEN PARTLY CLOUDY.
ISOLATED SHOWERS AND THUNDERSTORMS AFTER 1200.
SOME THUNDERSTORMS MAY PRODUCE GUSTY WINDS AND
SMALL HAIL AFTER 1200.
MAX TEMPERATURE....76-81.
24 HR TREND.....UNCHANGED.
MIN HUMIDITY.....26-32 PERCENT.
24 HR TREND.....3 PERCENT DRIER.
20-FOOT WINDS.....SOUTHWEST WINDS 10 TO 15 MPH WITH HIGHER GUSTS
UNTIL 1200...THEN AROUND 20 MPH WITH GUSTS TO
AROUND 25 MPH.
RIDGE TOP WINDS.....SOUTHWEST 15 TO 20 MPH.
LAL.....1 UNTIL 1200...THEN 3.
CHC OF WETTING RAIN.ZERO PERCENT UNTIL 1200...THEN 15 PERCENT.
TRANSPORT WINDS.....SOUTHWEST 15 TO 20 MPH UNTIL 1200...THEN AROUND
25 MPH.
MIXING HEIGHT.....2500-5000 FT AGL UNTIL 1200...THEN 6000-8500 FT
AGL.
SMOKE DISPERSAL....GOOD (62000-82000 KNOT-FT) UNTIL 1200...THEN
VERY GOOD TO EXCELLENT (136000-156000 KNOT-FT).
HAINES INDEX.....3 OR VERY LOW POTENTIAL FOR LARGE PLUME
DOMINATED FIRE GROWTH.

.TONIGHT...
SKY/WEATHER.....PARTLY CLOUDY. ISOLATED SHOWERS AND
THUNDERSTORMS. SOME THUNDERSTORMS MAY PRODUCE
GUSTY WINDS.
MIN TEMPERATURE....41-46.
24 HR TREND.....UNCHANGED.
MAX HUMIDITY.....58-64 PERCENT.
24 HR TREND.....18 PERCENT DRIER.
HUMIDITY RECOVERY...GOOD.
20-FOOT WINDS.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO
AROUND 25 MPH UNTIL 0300...THEN
DOWNSLOPE/DOWNVALLEY 4-7 MPH.
RIDGE TOP WINDS.....SOUTHWEST 15 TO 20 MPH UNTIL 0300...THEN AROUND
10 MPH.
LAL.....3 UNTIL 2400...THEN 2.
CHC OF WETTING RAIN.15 PERCENT UNTIL 2400...THEN 5 PERCENT.
TRANSPORT WINDS.....SOUTHWEST 15 TO 20 MPH.
MIXING HEIGHT.....4000-6500 FT AGL UNTIL 2400...THEN 1000-2000 FT
AGL.
SMOKE DISPERSAL....GOOD TO VERY GOOD (90000-110000 KNOT-FT) UNTIL
2400...THEN POOR (10000-30000 KNOT-FT).
HAINES INDEX.....4 OR LOW POTENTIAL FOR LARGE PLUME DOMINATED
FIRE GROWTH.

.SATURDAY...
SKY/WEATHER.....PARTLY CLOUDY UNTIL 1200...THEN MOSTLY SUNNY.
MAX TEMPERATURE....70-75.
24 HR TREND.....6 DEGREES COOLER.
MIN HUMIDITY.....20-26 PERCENT.
24 HR TREND.....6 PERCENT DRIER.

Fire Weather Zone Forecast

20-FOOT WINDS.....UPSLOPE/UPVALLEY 5-9 MPH UNTIL 1200...THEN WEST
AROUND 15 MPH WITH HIGHER GUSTS.
RIDGE TOP WINDS.....WEST 10 TO 15 MPH UNTIL 1500...THEN AROUND 20
MPH.
LAL.....1.
CHC OF WETTING RAIN.ZERO PERCENT.
TRANSPORT WINDS.....WEST 15 TO 20 MPH.
MIXING HEIGHT.....1500-4000 FT AGL UNTIL 1200...THEN 4500-7000 FT
AGL.
SMOKE DISPERSAL.....POOR TO FAIR (24000-44000 KNOT-FT) UNTIL
1200...THEN GOOD TO VERY GOOD (80000-100000
KNOT-FT).
HAINES INDEX......4 OR LOW POTENTIAL FOR LARGE PLUME DOMINATED
FIRE GROWTH.

.FORECAST DAYS 3 THROUGH 7.....
.SATURDAY NIGHT...CLEAR. LOWS IN THE UPPER 30S. WINDS GENERALLY LESS
THAN 10 MPH.
.SUNDAY...CLEAR. LOWS IN THE LOWER 40S. HIGHS IN THE MID 70S. WINDS
GENERALLY LESS THAN 10 MPH.
.LABOR DAY...PARTLY CLOUDY. ISOLATED SHOWERS AND THUNDERSTORMS. LOWS
IN THE MID 40S. HIGHS IN THE LOWER 70S. WINDS GENERALLY LESS THAN
10 MPH.
.TUESDAY...PARTLY CLOUDY WITH SCATTERED SHOWERS AND ISOLATED
THUNDERSTORMS. LOWS IN THE UPPER 40S. HIGHS AROUND 70. WINDS
GENERALLY LESS THAN 10 MPH.
.WEDNESDAY THROUGH THURSDAY...PARTLY CLOUDY WITH ISOLATED SHOWERS
AND THUNDERSTORMS. LOWS IN THE UPPER 40S. HIGHS 68 TO 73.

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1.2.3. Values

NAME	VALUE
Planning Area Name	08/18/2013 18:27
Incident Name	SHEEP CREEK - Miner Paradise Complex
Planning Area Size	763,010 acres

Values Inventory

Category	Value	Data Source	Currency	Coverage
BLM Buildings	1	GeoCommunicator / Other Sources	07/21/2010	BLM Lands
BLM Oil / Gas Leases	29,418 acres	BLM/NOC	06/04/2012	Western United States
BLM Range Allotments	10,472 acres	BLM State offices (compiled by BLM NOC)	06/26/2012	Western United States
Building Clusters: Gallatin, MT	516	US Counties / FGDC Cadastral Subcomm.		Available counties
Building Clusters: Park, MT	2,687	US Counties / FGDC Cadastral Subcomm.		Available counties
Building Clusters: Park, WY	no data	US Counties / FGDC Cadastral Subcomm.		Available counties
Campgrounds	13	BLM (NOC) and USFS (NIFC)	02/28/2013	National (BLM and USFS only)
Class 1 Airsheds	57,685 acres	NPS Air Resources Division	Various	National
Communication Towers	113	FCC	06/14/2012	National
County: Gallatin, MT	139,215 acres	HSIP 2011, US Census Bureau TIGER data	07/01/2010	National
County: Park, MT	623,688 acres	HSIP 2011, US Census Bureau TIGER data	07/01/2010	National
County: Park, WY	153 acres	HSIP 2011, US Census Bureau TIGER data	07/01/2010	National
Electric Power Plants	1	HSIP	11/2011	National
Electric Sub Stations	12	HSIP	11/2011	National
Electric Transmission Lines	130.8 miles	HSIP	11/2011	National
Est Ground Evac Time: 1-2 Hrs	145,674 acres	National Park Service NIFC	11/01/2012	CONUS
Est Ground Evac Time: 2-4 Hrs	165,679 acres	National Park Service NIFC	11/01/2012	CONUS
Est Ground Evac Time: 4-6 Hrs	113,918 acres	National Park Service NIFC	11/01/2012	CONUS
Est Ground Evac Time: 6+ Hrs	144,577 acres	National Park Service NIFC	11/01/2012	CONUS
Habitat: Canada Lynx	520,141 acres	FWS Geospatial Services	01/2013	National
IRA: Chico Peak IRA	11,053 acres	Various		National
IRA: Gallatin Fringe IRA	108,340 acres	Various		National
IRA: Hyalite-Porcupine-Buffalo Horn Wilderness Study Area WSA IRA	34,348 acres	Various		National
IRA: North Absaroka IRA	56,225 acres	Various		National
Jurisdictional Agency: BLM	6,045 acres	Various	08/08/2011	National
Jurisdictional Agency: NPS	58,629 acres	Various	08/08/2011	National
Jurisdictional Agency: USFS	411,126 acres	Various	08/08/2011	National

Values Inventory

Category	Value	Data Source	Currency	Coverage
NPS Buildings	55	NPS - FMSS	03/12/2013	National
Natl Recreation Trails	0.3 miles	Various	varies by data source	National
Oil and Gas Pipelines	1.1 miles	HSIP	11/2011	National
Other Areas: Wheeler Ridge ERNA	642 acres	Various	varies by data source	National
Responsible Agency: C&L	200,868 acres	Various	08/24/2012	AK, CA, ID, MT, NM, MN
Responsible Agency: NPS	58,535 acres	Various	08/24/2012	AK, CA, ID, MT, NM, MN
Responsible Agency: State	1 acres	Various	08/24/2012	AK, CA, ID, MT, NM, MN
Responsible Agency: USFS	500,711 acres	Various	08/24/2012	AK, CA, ID, MT, NM, MN
Roads	92.7 miles	NAVTEQ	07/01/2011	National
USFS Buildings	39	USFS-INFRA	03/14/2013	National
WYYNP - Infrastructure / West Comm Twrs	22	WYYNP		Unit
Wilderness: Absaroka-Beartooth Wilderness	94,197 acres	Various	04/23/2013	National

Coverage of Values Queried that Produced No Results

BLM Horse and Burro (OR, ID, MT, CA, NV, UT, WY, CO, AZ, NM), Mines (National), NRA (National), Natl Historic Trails (National), Natl Scenic Byways (National), Natl Scenic Trails (National), Ozone Non-Attainment (National), Particulates Non-Attainment (National), Sage Grouse Habitat (Western United States), TNC Lands (National), USFWS Trails (National), WSA (National)

1.3. Objectives

Incident FMU/Strategic Objective Code List

Unit	FMU/Strat Obj Code	Acres
MTBUD	Yellowstone - C Polygon	5,916
MTGNF	FMU_1 - Emphazise Full Perimeter Control	175,713
MTGNF	FMU_2 - Mixed Strategy Options	213,260
MTGNF	FMU_3 - Emphasize Full Management Options	93,571
WYYNP	Parkwide	58,572

Spatial Fire Planning Inventory

Category	Value	Data Source	Currency	Coverage
Aquatic Retardant Avoidance	60,916 acres	USFS Enterprise Data Warehouse	5/6/2013	National (USFS Units only)
Retardant Avoidance	751 acres	USFS Enterprise Data Warehouse	5/6/2013	National (USFS Units only)

Incident Objective List

Activated	Incident Objective
08/18/2013	<p>Emigrant - Management Area 17 are grasslands or nonproductive forestlands on slopes less than 40 percent that are suitable for livestock grazing and contain important big game habitat. They contain some of the most productive and heavily used portions of range allotments.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Maintain or improve vegetative conditions and forage production for livestock use.
08/18/2013	<p>Sheep - Management Area 14 consists of big game winter ranges located in either open grasslands or a mosaic of grasslands and forested habitats.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Maintain and/or enhance big game habitat. 2. Meet grizzly bear mortality reduction goals as established by the Interagency Grizzly Bear Committee. 3. Provide forage for livestock consistent with goal 1.
08/18/2013	<p>North Eightmile - Management Area 11 consists of forested big game habitat, and also allow timber harvesting. Maintain elk habitat effectiveness following timber harvest.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Base vegetative management on vegetative characteristics needed for featured wildlife species. 2. Allow for a level of timber harvest consistent with goals 1 and 2. 3. Meet State water quality standards and maintain stream stability.
08/18/2013	<p>North Eightmile - Management Area 3 consists of non-forested, noncommercial forest, and forested areas which are unsuitable for timber production. They generally do not have roads passing through them. Topographic constraints and poor accessibility characterize these areas.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Managed essentially in their present condition to protect existing improvements and resources, with minimal investment for resource activities.
08/18/2013	<p>Emigrant - Management Area 4 includes the Gallatin NF portion of the Absaroka-Beartooth and the Lee Metcalf Wilderness, plus the Lionhead and Republic Mountain recommended wilderness. Occupied Grizzly bear habitat is present in much of these areas.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Manage existing wilderness in accordance with the Wilderness Act of 1964, Forest Service Manual direction and site specific direction. 2. Manage recommended wilderness to protect the wilderness characteristics and to allow existing uses pending congressional action on their classification. 3. Manage activities within Grizzly bear habitat for recovery of the Grizzly bear. <p><i>Fire Management:</i></p> <ol style="list-style-type: none"> 1. One or more fire management strategies may be considered and implemented for any unplanned wildland fire to achieve a variety of resource management objectives, while minimizing negative effects to life, investments and valuable resources (Amendment 2011).

Activated	Incident Objective
	<p>2. Forest Service Manual 2324.2 (Managing Fire in Wilderness Areas):</p> <ul style="list-style-type: none"> • Permit fire to play, as nearly as possible, its natural ecological role on the landscape. • Reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness. • Allow fire to move into and out of wilderness boundaries as necessary based on the historic burning patterns, ecological health, impacts to abiotic and biotic components of the wilderness.
08/18/2013	<p>Emigrant (& Sheep) - Management Area 13 consists of forested, occupied grizzly bear habitat.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Manage vegetation to provide habitat necessary to recover the grizzly bear. 2. Meet grizzly bear mortality reduction goals as established by the Interagency Grizzly Bear Committee. 3. Allow a level of timber harvest compatible with goal 1. 4. Meet State water quality standards and maintain stream channel stability.
08/18/2013	<p>Sheep & Emigrant - Management Area 15 consists of open grasslands or a mosaic of grasslands or steep rocky slopes interspersed with timber which are located in occupied grizzly bear habitat and provide for dispersed recreation and livestock use.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Meet grizzly bear mortality reduction goals as established by the Interagency Grizzly Bear Committee. 2. Manage vegetation to provide habitat necessary to recover the grizzly bear. 3. Provide forage for livestock consistent with goal 1. 4. Provide for a variety of dispersed recreation opportunities.
08/18/2013	<p>North Eightmile & Horsetail - Management Area 12 provide important habitat for summer or winter wildlife use in a variety of terrain and vegetative types.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Maintain and improve the vegetative condition to provide habitat for a diversity of wildlife species. 2. Provide for a variety of dispersed recreation opportunities. 3. Provide forage for livestock consistent with goal 1.
08/18/2013	<p>Horsetail & North Eightmile - Management Area 18 is comprised of the high mountain peaks and valleys in the Northern portion of the Hyalite-Porcupine-Buffalo Horn Study Area.</p> <p><i>Management Goals:</i></p> <ol style="list-style-type: none"> 1. Emphasize dispersed recreation use and protect scenic qualities. 2. Maintain and enhance Big Horn sheep habitat.
08/18/2013	<p>Sheep Creek - Minimize impact to private land in the Tom Miner Basin. To include the Grizzly Creek Ranch and the B Bar Ranch.</p>
08/18/2013	<p>North Eightmile & Horsetail - Protect the municipal watersheds of Hyalite and Bozeman Creek from extensive and high severity wildfire.</p>
08/18/2013	<p>Minimize impacts to traffic and provide for public safety along the Highway 89 travel corridor caused by smoke and people stopping to view the fire</p>
08/18/2013	<p>Emigrant - Minimize impacts to the permittee on the Six-mile North Range Allotment. The permittee currently has 80 cow/calf pairs in the north portion of the allotment</p>
08/18/2013	<p>Minimize fire effects to non-National Forest System Lands(State, Private and BLM) within the planning area - Contain fire to National Forest System Lands.</p>
08/18/2013	<p>Provide for safety of recreating public.</p> <p>Emigrant - FS trails #61 Sixmile Trail and #606 North Fork of Sixmile Trail are located within the planning area. Emigrant Peak is a popular recreation site accessed through the planning area. Consider the safety of recreationalists on the Yellowstone River to avoid conflicts with helicopter bucket operations.</p>
08/18/2013	<p>North Eightmile - Minimize impacts to private land in the Trail Creek, West Pine and North Dry Creek areas. As well as City of Bozeman lands to the west.</p>
08/18/2013	<p>Utilize existing barriers and topographical changes to limit exposure to firefighters while containing fire spread.</p>
08/18/2013	<p>Provide for safety of recreating public.</p> <p>Sheep - Coordinate closure of YNP's Skyline Trail access.</p>

Incident Objective List

Activated	Incident Objective
08/18/2013	Horsetail & North Eightmile - Consider and plan for the safety of the public in these high use recreation areas. Consider evacuation planning, access routes, volume of recreation traffic, and the complexity of multiple recreation sites.
08/18/2013	North Eightmile - Protect Mystic Lake Cabin and the Mystic Lake dam.
08/22/2013	Protect the private and recreation residences, Mill Creek Cabin and Snowbank Campground in the Mill Creek drainage.
08/22/2013	Construct and utilize contingency lines placed well before the fire would reach the private and recreation residences, Mill Creek cabin or Snowbank campground located in the Mill Creek drainage. Maintain contact with campground administrator, recreation residences and outfitter guides in the area. Consider hose lay and sprinkler system to protect structures if needed; cooperate with recreation residence owners.
08/30/2013	Emigrant - Protect private structure at the confluence of Sixmile and the North Fork of Sixmile creeks.

Incident Requirement List

Activated	Incident Requirement
08/18/2013	IMPORTANT FOR ALL FIRES IN COMPLEX - Minimize potential bear/human interactions; report any human-bear encounters to the local unit's resource advisor. <ul style="list-style-type: none"> • All personnel assigned to the incident comply with the Food Storage Special Order 36 CFR 261.58, in effect for the Greater Yellowstone Ecosystem (GYE). • Occupied grizzly bear habitat and use prevalent in all fire areas. • Enforce strict adherence to grizzly bear food storage order/guidelines and bear spray use guidelines as provided by the resource advisor. • Management actions and incident support facilities must consider the presence of bears and the need to minimize any encounter potentials with humans or trash. • Failure for a crew or individual to comply with the Special Order will result in dismissal from the fire incident and potentially further disciplinary action, including issuance of citations to the individual(s).
08/18/2013	Make public, firefighter and aviation safety number one priority. Incorporate as part of your operational planning process, ensuring all Incident Action Plans reflect this commitment to safety through the 10 Standard Firefighting Orders and the 18 Watchout Situations, and if you cannot mitigate a tactical hazard, don't implement the corresponding tactical action. Monitor cumulative fatigue, ensure all assigned firefighter personnel receive adequate rest, and any operational period in excess of 16 hours requires documentation along with measures initiated to reduce fatigue.
08/18/2013	Precautions must be taken to prevent the introduction and subsequent spread of noxious weeds and non-native species: <ul style="list-style-type: none"> • This includes the pre and post treatment of vehicles and helicopters utilized to support this incident. • Ensure all helibase touchdown pads and cargo areas are free of noxious weed flowering heads or cleaned of noxious weed flowering heads when such areas are established. • Inspect all cargo nets used in sling operations will be inspected for plant parts at time of service check at the helibase and soil and plant parts removed before use. • Wash vehicles and equipment upon arrival at the check in station and departure from the check out station to mitigate weed seed dispersal.
08/18/2013	Establish an effective communication protocol to keep public informed and squelch the spread of misinformation: <ul style="list-style-type: none"> • Keep public, government representatives, cooperators and stakeholders informed of fire behavior and management actions. • Public information meetings, facts sheets, press releases and news media relations for the fire incident will be coordinated between the Incident Commander, the team's fire Information Officer and the Yellowstone District Ranger. • Ensure a high level of public and media engagement in fire information continues throughout the incident. • Notify the public and contact Montana DEQ Air Quality Division when smoke output could cause health problems.
08/18/2013	Be prepared to manage an "Incident within an Incident". This might include, but are not limited to serious injuries, health emergencies, emergency evacuations, and wildlife interactions.
08/18/2013	

Incident Requirement List

Activated	Incident Requirement
	<p>Use Minimum Impact Suppression Tactics (MIST) in Absaroka-Beartooth Wilderness and Hyalite-Porcupine-Buffalohorn Wilderness Study Area, when feasible:</p> <ul style="list-style-type: none"> Wilderness Area only - All use of mechanical equipment (chainsaws, pumps, etc) must be coordinated with the Resource Advisor and approved by the Agency Administrator. Wilderness Area only - Document all helicopter landings, longlines, or rappels on the log provided.
08/18/2013	<p>Precautions must be taken to prevent the introduction and subsequent spread of aquatic invasive species (AIS) or pathogens.</p> <ul style="list-style-type: none"> This includes pre and post treatment of buckets, snorkels, and other apparatus utilized for water delivery operations during the incident. Dip sites should be approved in advance and measures should be taken to preclude introduction of non-native aquatic species. Do not transfer water between drainages. Avoid drafting or dipping from known AIS-positive water sources. Avoid if possible, drafting or dipping from the Yellowstone River or Hyalite Creek downstream of Hyalite Dam. Avoid contacting and sucking up mud and aquatic plants when drafting/dipping equipment. Use screens. If possible, dip or draft water from the deepest portion of a lake or stream to avoid contact with bottom sediment. <i>Note - Aviation operational safety takes precedence!</i>

Strategic Objective List

Unit	Shape/FMU	Activated	Strategic Objective
MTBUD	Yellowstone	07/22/2011	<ul style="list-style-type: none"> The response to all wildfires that exceed initial attack is to protect improvements, facilities and the infrastructure and suppress the wildfire spread in and around those areas. Identify management actions to be implemented where fuels and weather increase risk of fire spreading into adjacent jurisdictions. Those wildfires or portions of wildfires that do not pose a threat to adjacent jurisdictions will be managed to minimize firefighter and aviation exposure commensurate with the values at risk. Coordinate all actions with the potentially affected federal, state, local government agencies, and any adjacent landowners.
WYYNP	Parkwide	09/03/2009	Complete rehabilitation of areas impacted by suppression activities
WYYNP	Parkwide	09/03/2009	Promptly and safely respond to all wildland fires by implementing the appropriate management response that is consistent with agency and departmental policy
WYYNP	Parkwide	09/03/2009	All human-caused fires will be suppressed emphasizing safety to firefighters and sensitivity to park resources by using Minimum Impact Suppression Tactics (MIST).
WYYNP	Parkwide	09/03/2009	Provide for safety of firefighters, visitors, employees, and park neighbors during all wildland fire management operations by ensuring that safety is the priority on all fire management actions
WYYNP	Parkwide	09/03/2009	Ensure wildland fire suppression operations will employ Minimum Impact Suppression Tactics on all suppression fires
WYYNP	Parkwide	09/03/2009	Maintain an interpretive and public information program that will educate public on the ecological role of fire in the park and provide daily fire danger and situation information
WYYNP	Parkwide	09/03/2009	Allow fire to play its ecological role in the park to the greatest extent possible through the use of appropriate management techniques
WYYNP	Parkwide	09/03/2009	Suppress [unwanted] wildfires in a safe, cost-effective, and environmentally sensitive manner commensurate with the values at risk.

Management Requirement List

Unit	Shape/FMU	Activated	Management Requirement
MTBUD	Yellowstone	07/22/2011	<ul style="list-style-type: none"> Ensure prompt and accurate communications that fosters discussions and encourages interactions with the hosting agency(s), assigned agency representatives, local cooperators and private landowners. Coordinate all your tactical operations with the assigned Resource Advisor. Develop all your tactical operations within the boundaries of the identified strategic course of action. Coordinate all your financial transactions with the assigned Incident Business Advisor, and be prepared to discuss and validate daily operational costs. Utilize the Incident Business Management Guide to assist with your business management decisions.

Unit	Shape/FMU	Activated	Management Requirement
			<ul style="list-style-type: none"> • Final fire package will follow the attached Northern Rockies Coordinating Group standard format. Any deviation from this format will be brought to the attention of the assigned Incident Business Advisor. • Monitor cumulative fatigue, and ensure all assigned firefighting personnel receive adequate rest. Any operational period in excess of 16 hours requires documentation and the implementation of measures to reduce fatigue. Include a summary of excess hours worked and the appropriate mitigation, and include in your closeout package. • Minimize weed spread by incorporating weed prevention and containment practices such as: mowing, flagging or fencing weed patches, designating weed-free travel routes and washing equipment. • Incident bases, camps, helibases, staging areas, and other incident management activities will be located outside of riparian areas. If unavoidable an exemption could be made by line officer. • Delivery of chemical retardant, foam or additives to live streams will be avoided. Fish screens (1/8 inch diameter holes) on hoses will be required when removing water from fish bearing streams during fire management activities. • Use of retardant in Wilderness Areas or WSAs will be avoided and will require line officer approval. • Minimum Impact Suppression Tactics will be used when working in Wilderness Areas or WSAs. • Use of heavy equipment will be restricted to areas outside of Wilderness or WSAs.
MTGNF	FMU_1	04/20/2012	One or more fire management strategies may be considered and implemented for any unplanned wildland fire to achieve resource management objectives, while minimizing negative effects to life, investments and valuable resources. However, FMU 1 emphasizes full perimeter control because it includes high density WUI areas, private land inholdings, State of Montana lands, BLM lands, municipal watersheds, large developed campgrounds, dispersed rec sites, FS summer homes, FS administrative and rental cabins.
MTGNF	FMU_2	04/20/2012	One or more fire management strategies may be considered and implemented for any unplanned wildland fire to achieve resource management area objectives, while minimizing negative effects to life, investments and valuable resources. FMU 2 includes interface/ intermix WUI areas, roaded areas (suitable for engine access, 1-hr walk-in times, etc), and unroaded areas (RNA/SIAs, HPBH wilderness study area, and portions of designated wilderness areas).
MTGNF	FMU_3	04/20/2012	One or more fire management strategies may be considered and implemented for any unplanned wildland fire to achieve resource management area objectives, while minimizing negative effects to life, investments and valuable resources. FMU 3 includes all designated wilderness areas (A-B Wilderness and Lee Metcalf Wilderness) and recommended wilderness areas (Lionhead, Republic Mtn), YNP, and Cabin Creek Wildlife Mgt area across the GYA-North FPU (GNF & YNP).
MTGNF	FMU_3	04/20/2012	Permit fire to play, as nearly as possible, its natural ecological role on the landscape. Reduce the risks and consequences of wildland fire within wilderness or escaping from wilderness areas. Allow fire to move into and out of wilderness boundaries as necessary based on the historic burning patterns, ecological health, and impacts to abiotic and biotic components of the wilderness (FSM 2324.2).
WYYNP	Parkwide	09/03/2009	Yellowstone will adhere to MIST guidelines to avoid or mitigate impacts to sensitive cultural resources. These include specific mitigation measures such as fireline construction and mop-up, aviation management, logistics, firefighter camps, staging areas, helispots, personal conduct, and restoration and rehabilitation
WYYNP	Parkwide	09/03/2009	All WFU fires will be monitored by qualified personnel under standards identified in this plan (FMP)
WYYNP	Parkwide	09/03/2009	Yellowstone will apply the minimum requirement concept when making decisions concerning wildland fire management in the park's wilderness areas.
WYYNP	Parkwide	09/03/2009	The appropriate management response will be selected after comprehensive consideration of the local situation, risk to firefighter and public safety, available funding, management objectives, values to be protected, external concerns, and land use concerns.
WYYNP	Parkwide	09/03/2009	Fire management activities which result in the discharge of air pollutants are subject to, and must comply with, all applicable federal, state, interstate, and local air pollution control requirements.
WYYNP	Parkwide	09/03/2009	Fire management staff and resource advisors will educate fire crews on the appropriate method of protection of natural and cultural resource sites and features during suppression, WFU, prescribed fire, and hazardous fuels reduction treatments.

Management Requirement List

Unit	Shape/FMU	Activated	Management Requirement
WYYNP	Parkwide	09/03/2009	The FMO is responsible for ensuring that these identified sensitive natural resources such as wetlands and known habitat locations of sensitive plant and animal species are protected to the maximum extent possible.
	Retardant Avoidance	05/31/2012	The aerial application of fire retardant is allowed for fighting fires. Aerially delivered fire retardant should not be applied to any mapped terrestrial avoidance area, waterway or buffer. The only exception to using aerially applied fire retardant in avoidance areas is for the protection of human life or public safety . The Incident Commander is the decision maker. Information concerning the Record of Decision for the Aerial Application of Fire Retardant is available at http://www.fs.fed.us/fire/retardant/index.html
	Aquatic Retardant Avoidance	06/18/2013	The aerial application of fire retardant is allowed for fighting fires. Aerially delivered fire retardant should not be applied to any mapped terrestrial avoidance area, waterway or buffer. The only exception to using aerially applied fire retardant in avoidance areas is for the protection of human life or public safety . The Incident Commander is the decision maker. Information concerning the Record of Decision for the Aerial Application of Fire Retardant is available at http://www.fs.fed.us/fire/retardant/index.html

1.4. Course of Action

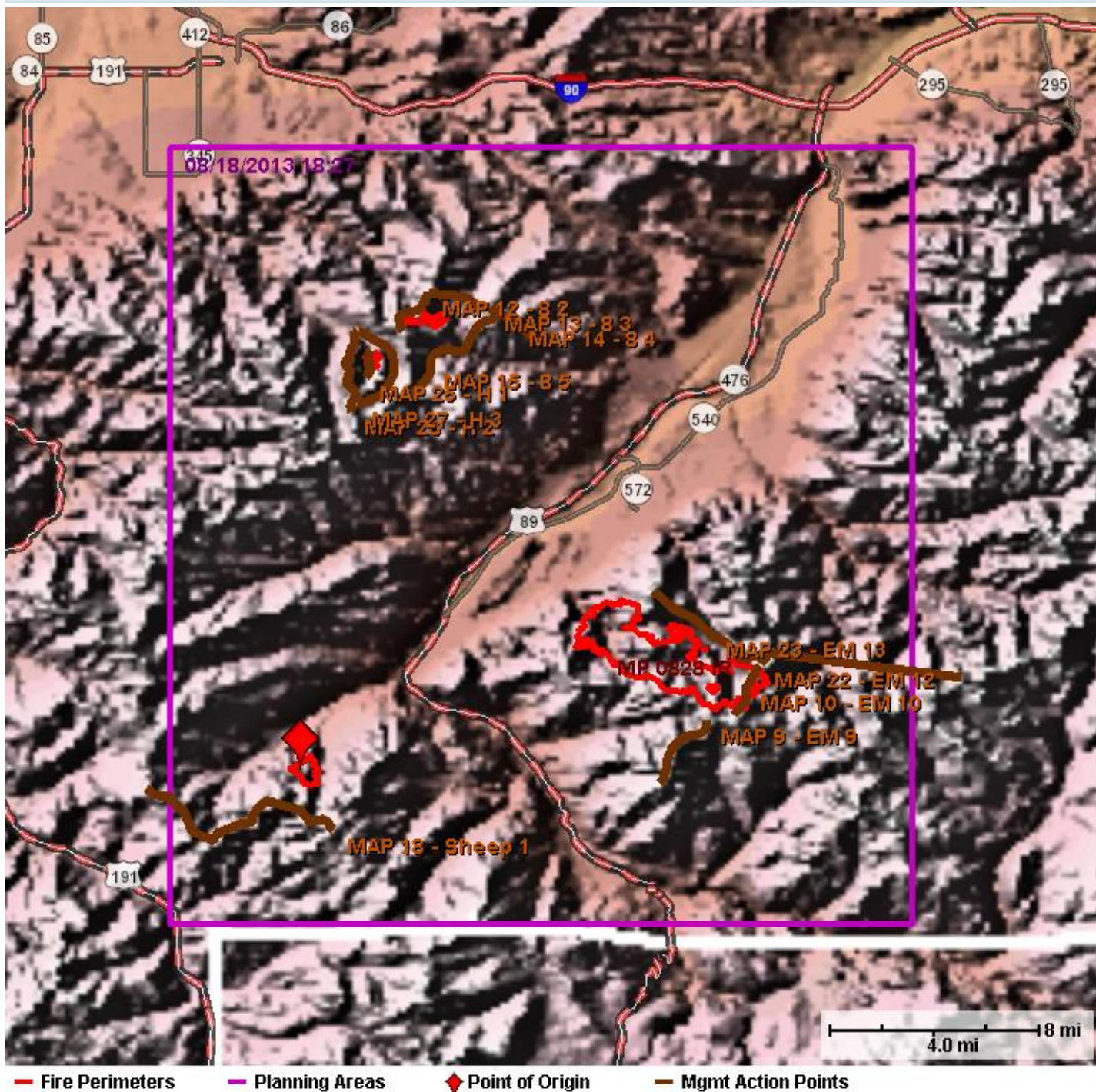
Estimated Cost

NAME	VALUE
Estimated Cost	\$9,500,000
Method(s) Used	

Course of Action

Active	Inactive	Action Item
08/18/2013		<p>Emigrant - Trail closures of Sixmile and North Fork of Sixmile Creek Trails will be implemented. Assess closures to be able to re-open as soon as they are considered to be safe for the recreating public. Public information officers will be posted in the vicinity to provide updated fire information.</p> <p>Fire information will be provided at various key locations in the Paradise Valley and will be updated frequently as needed</p>
08/18/2013		<p>Establish information sites staffed with public information officers in key locations along Highway 89, along the Bozeman foothills, and in the Hyalite drainage, to provide designated stops for the public.</p> <p>Highway signs will be posted along the Highway 89 corridor providing fire related information</p>
08/18/2013		<p>Utilize existing roads, trails, creeks, and rock features as much as possible.</p> <p>MA 4 and 21 and Hyalite-Porcupine-Buffalohorn WSA: Utilize Minimum Impact Suppression Tactics (MIST) and adhere to the Forest Retardant Avoidance area.</p>
08/18/2013		<p>Ensure strict adherence to the Greater Yellowstone Area (GYA) food storage order on National Forest and or other incident related facilities. Follow Bear Spray guidelines as provided by resource advisor.</p>
08/18/2013		<p>Affected Grazing Allotments: Sixmile North (Emigrant), Horse Creek, Tom Miner, Ramshorn & Reeder Creek (Sheep), Trail Creek, Fridley, West Pine & Eightmile (North Eightmile) - Keep in close contact with affected grazing allotment permittees, informing them of current fire activity and projected weather events. Closely coordinate with permittees in the event that they would move livestock in/out of fire areas.</p> <p>Be aware of locations of associated range improvements and document those that may need replacement during post-fire rehab efforts.</p>
08/18/2013		<p>Emigrant & Sheep - Conduct a structure protection assessment for the structures on the private inholding. Implement appropriate protection measures i.e. set up pumps, hoses, sprinkler system, as needed dictated by current and expected fire behavior and weather with cooperation of the landowner.</p>
08/18/2013		<p>Aquatic Invasive Species Protocol - Whirling disease is present in the Yellowstone River and Hyalite Creek downstream of Hyalite Dam. It is imperative that drafting or dipping from the Yellowstone National Park lakes, Yellowstone River and Hyalite Creek below Hyalite Dam occur only as a last resort.</p> <p>Avoid transferring water between the Yellowstone National Park lakes, Yellowstone to the Hyalite/Gallatin drainage and if possible between subdrainages.</p>
08/18/2013		<p>Sheep - Manage the fire within the constraints of terrain and access to contain fire south of Tom Miner Creek.</p> <p>Contain fire west of Grizzly Creek.</p> <p>Contain fire north of Cinnabar Creek.</p> <p>Protect communications site located on Sheep Mountain and at Sunlight Road.</p> <p>Protect private structures and private land.</p>
08/18/2013		<p>North Eightmile - Manage the fire within the constraints of terrain and access to contain fire east of the Gallatin Crest.</p> <p>Actively check any spread west of the Gallatin Crest.</p> <p>Minimize impacts to private lands.</p>
08/18/2013		<p>Affected Outfitter/Guide Operations: Keep in close coordination/contact with affected outfitter/guide permittees, informing them of current fire activity and projected weather events. Closely coordinate with O/G permittees concerning effects to camp operations and any area or trail closures that may be implemented.</p>
08/18/2013		<p>Horsetail Fire - Manage fire within the constraints of terrain and access to keep the fire south of the East Fork Road #62, east of Main Hyalite Road #620, and east of Trail #427. Continue the closure of the East Fork drainage.</p>

Active	Inactive	Action Item
08/22/2013		<p>Emigrant - Manage the fire within the constraints of terrain and access to contain the fire to the east of the Sixmile/Dailey Lake Road.</p> <p>Contain the fire west of Passage Creek.</p> <p>Contain the fire to the south of the White City/Chico area.</p> <p>Contain the fire to the north of the Yellowstone River.</p> <p>When effective, utilize past wildland fires to limit fire spread. Additional management actions may be needed to fortify these barriers and prevent spread.</p>
08/22/2013		<p>Ensure public safety by closing the appropriate areas and trails, as necessary as situation changes.</p> <p>Ensure public access by closing only those areas and trails necessary for public safety. Assess closures to be able to re-open as soon as they are considered to be safe for the recreating public.</p>
08/30/2013		<p>Protect private property including, but not limited to, the Quaid cabin, Huckleberry cabin and Emigrant Gulch mining infrastructure.</p>
08/30/2013		<p>Protect key heritage features including, but not limited to, the OTO Ranch, Gold Prize cabin and the Huckleberry cabin.</p>
08/30/2013		<p>Rehabilitate impacts from control actions, as opportunities arise.</p>



Management Action Point 9

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	EM 9
Activated	08/22/2013
Deactivated	

Condition

Emigrant - If fire is projected to cross the ridge between Monitor Peak and Sheep Mountain and Little Trail Creek trail #49.
 Intent - Public safety and containment of fire north of the Yellowstone River.

Management Action Point 9

Actions

Prepare for evacuation of residences in Jardine and Bear Creek.

Consider fireline along the edge of the timber/grass fuel change to prevent fire from moving farther down the drainage.

Resources

2 type 2 dozers or 2 type 1 or type 2 IA crews.

Retardant tanker

Type 1 or type 2 helicopter

Management Action Point 10

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	EM 10
Activated	08/22/2013
Deactivated	

Condition

Emigrant - If fire crosses the ridge between Mineral Mt. and Monitor Peak.

Intent - Public safety

Actions

Expand closure area to include the West Fork of Mill Creek.

Take appropriate action to limit spread to the north in the West Fork of Mill Creek.

Resources

Type 1 and type 2 helicopters.

Management Action Point 11

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	8 1
Activated	08/22/2013
Deactivated	

Condition

Eightmile - If resources are unable to continue to prevent spread into the Bozeman Creek watershed.

Intent - Public safety and reassessment due to municipal watershed and city lands

Actions

Consider additional closure in Bozeman Creek.

Reassess and create a new plan for the Bozeman Creek watershed to include stakeholder involment.

Consider structure protection measures for Mystic cabin.

Consider evacuation of Spike Camp.

Resources

District staff.

Management Action Point 12

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	8 2
Activated	08/22/2013
Deactivated	

Condition

Eightmile - If fire is projected to cross the ridge into the Trail Creek drainage.

Intent - Public safety

Actions

Consider notification or evacuation of the residents in Trail Creek.

Take actions along the ridge to minimize spread into Trail Creek.

Resources

Retardant tankers or type 1 or type 2 helicopters

Sheriff's deputies for notifications.

Management Action Point 13

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	8 3
Activated	08/22/2013
Deactivated	

Condition

Eighthmile - If fire is projected to cross the ridge into West Pine Creek.

Intent - Public safety

Actions

Consider notification or evacuation of the residents in West Pine Creek.

Take actions along the ridge to minimize spread into West Pine Creek.

Resources

Retardant tankers or type 1 or type 2 helicopters

Sheriff's deputies for notifications.

Management Action Point 14

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	8 4
Activated	08/22/2013
Deactivated	

Condition

Eighthmile - If fire is projected to cross the ridge into North Dry Creek.

Intent - Public safety

Management Action Point 14

Actions

Consider notification or evacuation of the residents in North Dry Creek.
Take actions along the ridge to minimize spread into North Dry Creek.

Resources

Retardant tankers or type 1 or type 2 helicopters
Sheriff's deputies for notifications.

Management Action Point 15

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	8 5
Activated	08/22/2013
Deactivated	

Condition

Eightmile - If fire is expected to continue moving down Eightmile Creek past the south fork or trail #132.
Intent - Public safety.

Actions

Consider notification or evacuation of the residents in North Dry Creek.
Take actions along the ridge to minimize spread into North Dry Creek.

Resources

Retardant tankers or type 1 or type 2 helicopters
Sheriff's deputies for notifications.

Management Action Point 18

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	Sheep 1
Activated	08/22/2013
Deactivated	

Condition

Sheep - Fire crosses Yellowstone National Park boundary.
Intent - Coordination with partners.

Actions

Consult with Yellowstone National Park to determine new Objectives and Courses of Action.

Resources

Management Action Point 22

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	EM 12

Management Action Point 22

Activated 08/22/2013
Deactivated

Condition

Emigrant - Fire crosses south of a line between Mineral Mtn and Mount Wallace.
Intent - Public safety.

Actions

Consider additional trail and area closures to include trails # 58 and #59 and the Mill Creek road above Snowbank campground.

Resources

Management Action Point 23

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	EM 13
Activated	08/22/2013
Deactivated	

Condition

Emigrant - Fire crosses the ridge north of North Fork Sixmile Creek.
Intent - Public safety and minimize damage to private property.

Actions

Consider structure protection in Emigrant Creek.
Consider Population Protection Plan MAP 8 actions in conjunction with Park County Sheriff's office.

Resources

Management Action Point 25

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	H 1
Activated	08/22/2013
Deactivated	

Condition

Horsetail - If fire rolls out below rock cliff band and establishes itself into Flanders Creek.
Intent - Public safety and prevent spread north in Hyalite creek.

Actions

Consider expanding closure to include west Hyalite drainage and upper Hyalite Reservoir.
Prep potential control lines and roads.

Resources

T1 or T2 Helicopter or Helicopters.
2 Type 2 or Type 1 crews.
District Personnel

Management Action Point 26

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	H 2
Activated	08/22/2013
Deactivated	

Condition

Horsetail -If fire is projected to cross Sleeping Giant Ridge.

Intent - Public safety. Minimize impacts to private property and agency infrastructure.

Actions

Consider structure protection measures for Window Rock cabin, Chisholm CG, Lions Camp, Hood Creek CG, Maxey FS Cabin, Edsall FS Cabin, Swingle Private Cabin and Langohr CG

Consider expanding closures.

Consider re-engagement with stakeholders

Consider prepping Road #620

Resources

Consider Retardant

Consider ordering and utilizing T1 or T2 helicopters

Consider utilizing engines and handcrews

Management Action Point 27

NAME	VALUE
Incident Name	SHEEP CREEK - Miner Paradise Complex
Cost	
Shape	H 3
Activated	08/22/2013
Deactivated	

Condition

Horsetail - If fire is projected to cross east hyalite trail # 434 or east hyalite road # 62

Intent: Public safety in a high use recreation area/corridor and roadways to THS. Minimize impacts to private property and agency infrastructure.

Actions

Consider expanding closure area.

Consider structure protection measures for window Rock Cabin, Chisolm CG, Lions Youth Camp, Hood CG, Maxey FS Cabin, Edsall FS Cabin, Swingle private cabin and Langohr CG.

Consider structure protection measures for Mystic Lake CG.

Contact stakeholders and City of Bozeman.

Resources

Consider Retardant

Consider the utilization of T1 and or T2 Helicopters..

Consider the Utilization of engines and handcrews

1.5. Validation

Validation History

Date (CDT)	User	Action	Comments
08/30/2013 14:49	SHEA, JULIE	Decision created	
08/30/2013 14:58	SHEA, JULIE	The proposed Course of Action will satisfy the Objectives	Course of action satisfies the incident objectives.

Relative Risk

NAME	VALUE
Relative Risk	Moderate
Duration	Medium
Saved By	Sites, Ashley
Completed	08/29/2013 15:18 CDT

Relative Risk Notes

Overall relative risk is moderate due to multiple factors including: length of remaining fire season, fire behavior and growth has been moderated by favorable weather; proximity to WUI and adjacency to private property; social concerns due to smoke impacts to Paradise valley residences, Hwy 89 and Bozeman; critical public information and education needs.

Hazards Notes

Most areas have not burned in the recorded past, and are long return interval, stand replacement fire regimes. Fires have room to grow. Fire behavior has moderated due to control actions and favorable weather. Remote, steep, rugged, in-accessable terrain with few safety zones and limited lookout positions. Limited opportunities to utilize water resources or retardant. Thick timber; abundant snags; heavy dead and down fuels; rolling material starting fires below, poses threat to firefighter safety. The fires are within occupied grizzly bear habitat.

Values Notes

Few known cultural sites. Fires are very visible and close to private land and structures. Fires are in popular recreation areas accessed through the fire areas. There are active grazing allotments with infrastructure including fences and water tanks. One fire is located in the Emigrant mining district (historic and current). There are likely many historic resource locations within the planning area. The areas are popular for hunting, fishing, hiking and horseback riding with active outfitter and guide permits.

Probability Notes

Seasonal severity changes between moderate and very high. Recent precipitation has occurred over the fires. Quite a bit of rock and some previous fire scars exist in the areas but there not enough to completely block spread. Natural barriers to fire spread are moderate. On the ground mitigations will be needed to protect threats to Forest Service boundary and private lands. A confinement strategy utilizing natural barriers would allow for some fire spread within the planning area.

1.6. Rationale

1. Rationale

This decision is for the Miner-Paradise Complex which includes the Emigrant, Sheep Creek, North Eightmile and Horsetail fires on the Gallatin National Forest. The decision is to manage these fires with a Type 2 team and a combination of perimeter control and confinement strategies. As detailed in the ten factors below and the relative risk assessment, a Type 2 team is appropriate based on the desirable number of personnel, limited number of resources, the daily operational complexity, limited number of control actions, and the generally limited accessibility of the area. Of these Values at Risk, the highest priority for protection at this time is private land and the Bozeman Municipal Watershed because it is within the closest proximity to the fire area. This priority is consistent with the Incident Objective and the Course of Action to protect private inholdings at the confluence of North and South Sixmile creeks as well as Tom Miner Basin. A structure protection assessment will be conducted for the structures on the private land. Appropriate protection measures will be implemented (i.e. set up pumps, hoses, sprinkler system) as needed, dictated by current and expected fire behavior and weather. Controlling the size and extent in the municipal watershed will be a priority. The estimated cost of the Course of Action is 9,500,000 (using the R1 Cost estimator method for 12,000 acres), based on the current conditions.

Risk Assessment

1. Describe the critical values at risk.

The safety of firefighters and the public are at risk given the fire potential due to steep and rugged terrain with dense and continuous fuels. The fire potential threat is exacerbated by the fact the fires are large and geographically distant. The critical values at risk are private lands most adjacent to the fire area, which include homes, livestock, property, and human life. Two of the fires in the complex are within the Municipal Watershed for the city of Bozeman – approximately 80% or more of the city water supply comes from the surface water streams in the Hyalite drainage and the Bozeman creek drainage.

2. What is the chance the critical values will be impacted and, if so, what are the consequences?

The likelihood that the fire will impact private property is moderate. Extent and consequences are high because of the development level and the proximity to the fire.

Fire in the municipal watersheds could produce ash and sediment that could result in closure of the diversion to the water treatment plant, restricting roughly 40% of the municipal water supply during the fire and/or any subsequent precipitation events.

Given the current size of the fires, existing fuel conditions and weather forecasts, the prediction is that this will be a long term incident. The longer the incident persists, the greater the exposure for firefighters and members of the public to fire-related hazards.

3. What are the opportunities to manage the fire to meet resource management plan objectives?

The majority of the fire planning area lies within National Forest System lands that are steep and inaccessible and unsafe for direct attack efforts. There is a heavy dead timber component as a result of insect infestations, ERCs in the 60s, and backing fire with short uphill runs, and some spotting can be expected. Past fire history would suggest a large potential fire size with a long duration. Based on time of season, there is potential for multiple large fire growth days. Within the containment areas the opportunity to meet resource objectives is high.

4. Describe the possible low probability/high consequences events?

1. The highest consequence to our operation is loss of life for either firefighters or the public as a result of uncontrolled fire or suppression activities.

2. Fire management has attempted to mitigate possible injury but serious injury or fatality to ground or air firefighting resources while engaged in fire suppression activities is possible due to extreme fire behavior combined with difficult terrain with limited safety zones and escape routes. Risks to the general public will be addressed with area or route closures and extensive public information.

3. Severe and extensive fire activity in both Hyalite and Bozeman creek drainages would result in potentially long or short term shut down of the water treatment plant that services the Bozeman Municipal Water supply, which could result in water rationing or need for bottled water for citizens and the business community – all water users. This type of shutdown would occur not only during the fire, but in subsequent precipitation events for years to come. Without continuous feed from the water diversion points (Hyalite and Bozeman creeks), there is very limited water available to the city.

4. Another high consequence event would involve fire on private property that results in structure and infrastructure losses.

5. Who are the stakeholders that should be consulted prior to making a decision?

Park and Gallatin County commissioners, the City of Bozeman, sheriff departments, Bureau of Land Management, private landowners, Montana Highway Patrol, Montana Department of Natural Resources and Conservation, Fish Wildlife and Parks, Montana Department of Environmental Quality, local fire protection districts, and permit holders.

Risk Decision

1. What alternative (objectives, strategies, and tactics) are being considered?

Implement a suppression strategy within the constraints of fire behavior and terrain, emphasizing public and firefighter safety, and private property as the next highest priority. A confine and contain strategy is being implemented. Ultimately, this

strategy, emphasizing indirect and indirect tactics using natural features and barriers was determined to be the only viable option. Direct attack was initiated and abandoned because of the terrain/behavior, and it was unsuccessful. The area is very susceptible to rolling debris and burning material that has been causing spot fire below the fire perimeter. A containment strategy is most likely to be successful, while minimizing long-term, overall risk exposure.

2. What is the exposure to responders for the alternative being considered?

Mainly indirect tactics will minimize exposure to ground resources. The increased use of aviation resources will increase exposure, and will be evaluated for use only with essential personnel on mission critical flights.

3. What is the relative (high, medium, low) probability of success associated with the alternative being considered?

With the confine and contain strategy, we can achieve a high probability of success in keeping the fire within the planning area with minimal loss to critical values. This level of success considers appropriate requested resources and tools.

4. Describe the alternative that provides for the best balance between desired outcomes and exposure to responders.

The chosen course of action emphasizes indirect attack tactics using tools such as aircraft, natural barriers, and contingency lines, while retaining the flexibility to go direct where safety of firefighters is not an issue. In consideration of fuel loading, fuel type, terrain, weather, and probability of success, we think this strategy will provide the best opportunity to meet objects and minimize risk exposure.

5. What are the critical threshold that will trigger reconsideration of the proposed alternative and how will they be monitored?

Critical threshold that would trigger reconsideration of the various strategies associated with this decision include the establishment of fire on private lands, extensive fire in the municipal watersheds and/or an unanticipated and significant change in fire activity and/or behavior.