

**National Interagency Coordination Center**  
**Incident Management Situation Report**  
**Sunday, August 4, 2019 – 0530 MT**  
**National Preparedness Level 2**

**National Fire Activity**

Initial attack activity:	Light (145 new fires)
New large incidents:	5
Large fires contained:	3
Uncontained large fires:**	17
Area Command teams committed:	0
NIMOs committed:	2
Type 1 IMTs committed:	1
Type 2 IMTs committed:	4

Nationally, there are 76 large fires being managed under a strategy other than full suppression.

\*\*Uncontained large fires include only fires being managed under a full suppression strategy.

[Link](#) to Geographic Area daily reports.

[Link](#) to Understanding the IMSR.

One RC-26 aircraft with Distributed Real-Time Infrared (DRTI) capability and support personnel from the 141st Air Refueling Wing (Washington Air National Guard) have been deployed to Fairbanks, AK in support of wildland fire operations in Alaska.

Active Incident Resource Summary						
GACC	Incidents	Cumulative Acres	Crews	Engines	Helicopters	Total Personnel
AICC	11	1,152,708	29	1	5	903
NWCC	10	26,362	81	103	42	2,587
ONCC	3	14,935	9	60	3	554
OSCC	7	974	19	32	4	668
NRCC	11	21,129	24	49	21	1,152
GBCC	13	17,054	12	41	5	503
SWCC	10	30,724	8	21	3	383
RMCC	3	758	4	2	0	84
EACC	0	0	0	0	0	0
SACC	3	6,991	0	6	0	35
<b>Total</b>	<b>71</b>	<b>1,271,638</b>	<b>186</b>	<b>315</b>	<b>83</b>	<b>6,869</b>

## **Northwest Area (PL 2)**

New fires:	16
New large incidents:	0
Uncontained large fires:	4
NIMOs committed:	1
Type 1 IMTs committed:	1
Type 2 IMTs committed:	2

**Williams Flats**, Colville Agency, BIA. IMT 2 (NW Team 8). Five miles southeast of Keller, WA. Timber, brush and tall grass. Active fire behavior with torching and short-range spotting. Structures threatened. Evacuations, area and road closures in effect.

**MP 97**, South Unit, Oregon DOF. IMT 1 (ODF Team 3). One mile south of Canyonville, OR. Timber. Moderate fire behavior with torching, running and smoldering. Numerous residences threatened.

**Devore Creek**, Okanogan-Wenatchee NF. NIMO (Phoenix). Three miles southwest of Stehekin, WA. Timber and brush. Moderate fire behavior with creeping, single tree torching and backing. Trail closures in effect.

**Left Hand**, Okanogan-Wenatchee NF. IMT 2 (NW Team 7). Seventeen miles northwest of Naches, WA. Timber and hardwood litter. Minimal fire behavior with creeping and smoldering. Numerous structures threatened. Area, road and trail closures in effect.

**E Evans Creek Fire**, Medford Unit, Oregon DOF. Ten miles northwest of Sams Valley, OR. Timber, chaparral and brush. No new information.

Incident Name	Unit	Size		% Acres	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Acres	Chge				Total	Chge	Crw	Eng	Heli			
Williams Flats	WA-COA	1,540	0	0	Ctn	8/16	155	91	4	3	6	0	350K	BIA
MP 97	OR-732S	13,119	34	50	Ctn	8/18	1,371	-143	49	42	18	0	14.9M	ST
Devore Creek	WA-OWF	180	0	0	Comp	11/30	83	-2	2	0	3	0	569K	FS
Left Hand	WA-OWF	3,406	0	85	Ctn	8/15	488	-110	11	23	7	0	7.6M	FS
E Evans Creek Fire	OR-711S	350	---	10	Ctn	8/15	208	---	6	13	7	1	750K	ST
Sulphur	WA-WFS	1,050	50	100	Ctn	---	0	0	0	0	0	0	75K	PRI
Large Fires Being Managed With a Strategy Other Than Full Suppression Without a Type 1 or 2 IMT Assigned														
Kusshi Creek	WA-YAA	953	0	90	Comp	8/6	81	0	2	8	1	0	950K	BIA

WFS – Washington State Fire Marshal's Office      YAA – Yakama Agency, BIA

## **Northern Rockies (PL 2)**

New fires:	31
New large incidents:	1
Uncontained large fires:	5
Type 2 IMTs committed:	1

**North Hills**, Central Land Office, Montana DNR. Transfer of command from IMT 2 (NR Team 3) back to the local unit will occur tomorrow. IMT will still be managing the Nevada Creek incident. Started on BLM land 12 miles north of Helena, MT. Timber and medium logging slash. Minimal fire behavior with smoldering and creeping. Precipitation occurred over the fire area yesterday.

**Nevada Creek**, Helena-Lewis and Clark NF. Ten miles southwest of Lincoln, MT. Timber and light logging slash. Moderate fire behavior with isolated torching and backing. Residences threatened. Area, road and trail closures in effect.

**Beeskove**, Lolo NF. Eight miles northeast of Missoula, MT. Timber. Minimal fire behavior with creeping and backing. Area and trail closures in effect.

**Ridgetop**, Petroleum County. Fifty-five miles north of Winnett, MT. Timber, brush and short grass. Extreme fire behavior. Structures threatened.

\* **Lick Creek**, Idaho Panhandle NF. Started on private land six miles southwest of Avery, ID. Timber and heavy logging slash. Active fire behavior with torching, uphill runs and spotting. Area closures in effect.

Incident Name	Unit	Size		% Acres	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Acres	Chge				Total	Chge	Crw	Eng	Hel			
North Hills	MT-CES	5,019	0	90	Ctn	UNK	316	0	3	19	0	0	5.7M	BLM
Nevada Creek	MT-HLF	55	15	0	Ctn	9/30	105	0	4	0	6	0	500K	FS
Beeskove	MT-LNF	319	68	0	Ctn	8/31	251	1	6	0	6	0	2.2M	FS
Ridgetop	MT-LG55	9,700	5,200	30	Ctn	8/7	154	59	3	18	1	0	640K	CNTY
* Lick Creek	ID-IPF	200	---	0	Ctn	8/11	117	---	4	3	4	0	500K	FS
Large Fires Being Managed With a Strategy Other Than Full Suppression Without a Type 1 or 2 IMT Assigned														
Barren Hill	ID-NCF	351	---	0	Comp	10/31	0	---	0	0	0	0	10K	FS

NCF – Nez-Perce-Clearwater NF

## Alaska Area (PL 2)

New fires:	3
New large incidents:	0
Uncontained large fires:	0
NIMOs committed:	1
Type 2 IMTs committed:	1

**Chalkyitsik Complex** (4 fires), Upper Yukon Zone, BLM. IMT 2 (AK Green Team). Fifteen miles east of Chalkyitsik, AK. Timber. Minimal fire behavior with backing, creeping and smoldering. Numerous structures threatened. Precipitation occurred over the fire area yesterday.

**Cornucopia Complex** (9 fires), Upper Yukon Zone, BLM. NIMO (Portland). Twenty-five miles west of Fort Yukon, AK. Timber and brush. Minimal fire behavior with creeping and smoldering. Precipitation occurred over the fire area yesterday.

Incident Name	Unit	Size		% Acres	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Acres	Chge				Total	Chge	Crw	Eng	Heli			
Hess Creek	AK-UYD	189,369	0	75	Comp	9/1	24	-40	0	0	0	3	3M	ST
Hodatic River	AK-GAD	11,169	---	0	Comp	8/29	0	---	0	0	0	0	10K	FWS
East Stoney River	AK-SWS	2,246	---	0	Comp	9/2	0	---	0	0	0	0	7K	ST
Pete Andrews Creek	AK-SWS	5,485	---	0	Comp	9/1	0	---	0	0	0	0	338K	TRI
Jump Peak	AK-SWS	2,207	---	0	Comp	9/1	0	---	0	0	0	0	8K	TRI
Beaver	AK-MID	14,316	---	0	Comp	9/30	0	---	0	0	0	2	345K	PRI
Swift Creek	AK-SWS	3,288	---	0	Comp	9/1	0	---	0	0	0	0	9K	ST
Chilchitna Headwaters	AK-SWS	304	---	0	Comp	9/1	0	---	0	0	0	0	9K	ST
Horn Foothills	AK-SWS	3,907	---	0	Comp	9/1	0	---	0	0	0	0	3K	ST
Page Mountain	AK-SWS	46,897	---	0	Comp	9/1	0	---	0	0	0	0	218K	ST
Sunshine Mountains	AK-SWS	21,850	---	8	Comp	9/1	0	---	0	0	0	0	5K	ST
Holokuk Ridge	AK-SWS	447	---	0	Comp	9/1	0	---	0	0	0	0	1K	ST
Tundra Lake	AK-SWS	1,051	---	0	Comp	9/1	0	---	0	0	0	0	130K	TRI
Hoholitna	AK-SWS	548	---	0	Comp	9/30	0	---	0	0	0	0	2K	ST
Beaver House Hill	AK-SWS	420	---	0	Comp	9/1	0	---	0	0	0	0	3K	TRI
Devil's Elbow	AK-SWS	8,126	---	0	Comp	9/1	0	---	0	0	0	0	51K	ST
Little Titnuk	AK-SWS	2,966	---	0	Comp	9/1	0	---	0	0	0	0	2K	ST
Door Mountains	AK-SWS	3,660	---	0	Comp	9/1	0	---	0	0	0	0	5K	ST
Swift River	AK-SWS	839	---	0	Comp	9/1	0	---	0	0	0	0	4K	ST
Molybdenum Mountains	AK-SWS	659	---	0	Comp	9/1	0	---	0	0	0	0	3K	ST
Stony River Flats	AK-SWS	372	---	0	Comp	9/1	0	---	0	0	0	0	4K	BLM
Aghaluk Creek	AK-SWS	1,513	---	0	Comp	9/1	0	---	0	0	0	0	55K	TRI
Iditarod River	AK-SWS	446	---	0	Comp	9/1	0	---	0	0	0	0	2K	BLM
Fuller Creek	AK-SWS	8,549	---	0	Comp	9/1	0	---	0	0	0	0	19K	BLM
Cotton Village	AK-SWS	757	---	0	Comp	9/1	0	---	0	0	0	0	2K	ST
Old Grouch Top	AK-SWS	307,969	---	0	Comp	9/2	0	---	0	0	0	0	28K	ST
Little Kasigluk	AK-SWS	4,409	---	0	Comp	9/1	0	---	0	0	0	0	2K	FWS
Chetaslina	AK-CRS	2,125	---	0	Comp	8/30	16	---	0	0	1	0	168K	NPS
Tokaina 2	AK-CRS	1,100	---	0	Comp	8/31	11	---	0	0	0	0	60K	ST
Garfield Creek	AK-GAD	414	---	0	Comp	8/31	0	---	0	0	0	0	5K	ST
Wolf Creek Mountain	AK-GAD	674	---	0	Comp	8/31	0	---	0	0	0	0	5K	FWS
North River	AK-GAD	110,451	---	0	Comp	9/1	0	---	0	0	0	0	40K	BLM
McArthur Creek	AK-TAS	25,174	---	1	Comp	UNK	0	---	0	0	0	1	510K	ST
South Fork Buckland River	AK-GAD	3,237	---	0	Comp	9/30	0	---	0	0	0	0	10K	BLM
Kugruk River 1	AK-GAD	2,707	---	0	Comp	9/1	0	---	0	0	0	0	15K	BLM
Buckland 3	AK-GAD	2,338	---	0	Comp	9/30	0	---	0	0	0	0	NR	BLM
Kateel River	AK-GAD	1,887	---	0	Comp	9/1	0	---	0	0	0	0	NR	BLM

Incident Name	Unit	Size		%	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Acres	Chge				Total	Chge	Crw	Eng	Heli			
Koyuk River	AK-GAD	892	---	0	Comp	9/30	0	---	0	0	0	0	NR	BLM
East Fork Dennison	AK-TAS	400	---	0	Comp	UNK	0	---	0	0	0	0	3K	ST

KKS – Kenai-Kodiak Area, Alaska DOF    TAD – Tanana Zone, BLM    DAS – Delta Area, Alaska DOF    GAD – Galena Zone, BLM  
 SWS – Southwest Area, Alaska DOF    MID – Military Zone, BLM    CRS – Valdez-Copper River Area, Alaska DOF  
 TAS – Tok Area, Alaska DOF

### Great Basin Area (PL 2)

New fires: 32  
 New large incidents: 3  
 Uncontained large fires: 4

\* **Cove Creek**, Salmon-Challis NF. Twenty-seven miles northwest of Salmon, ID. Timber and tall grass. Extreme fire behavior with crowning, short crown runs and uphill runs.

\* **Paint Mine**, Richfield Field Office, BLM. Four miles north of Nephi, UT. Short grass. Active fire behavior with running.

**Alaska**, Unita-Wasatch-Cache NF. Three miles southeast of Provo, UT. Brush and grass. Minimal fire behavior with smoldering. Trail closures in effect.

\* **River Breaks**, Richfield Field Office, BLM. Fourteen miles west of Nephi, UT. Short grass. Moderate fire behavior with running.

Incident Name	Unit	Size		%	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Acres	Chge				Total	Chge	Crw	Eng	Heli			
* Cove Creek	ID-SCF	115	---	0	Ctn	8/31	11	---	0	1	0	0	50K	FS
* Paint Mine	UT-RID	400	---	20	Ctn	8/4	19	---	0	9	0	0	50K	BLM
Alaska	UT-UWF	489	0	65	Ctn	8/15	75	-32	3	2	0	0	680K	FS
* River Breaks	UT-RID	341	---	50	Ctn	UNK	50	---	1	6	1	0	50K	BLM
Spud	ID -TFD	4,889	0	100	Ctn	---	64	16	1	9	1	0	200K	BLM

Large Fires Being Managed With a Strategy Other Than Full Suppression Without a Type 1 or 2 IMT Assigned

Park Ridge	UT-FIF	120	---	25	Comp	9/15	35	---	1	1	0	0	120K	FS
Peavine Canyon	UT-MLF	3,904	---	10	Comp	8/15	91	---	3	3	0	0	1.8M	FS
Poison Canyon	UT-MLF	1,105	---	0	Comp	8/15	32	---	1	1	0	0	168K	FS
Shady	ID-SCF	3,931	---	0	Comp	10/31	24	---	1	2	0	0	155K	FS
Skull Flat	UT-FIF	1,630	---	85	Comp	9/1	5	---	0	1	0	0	1.7M	FS
Mammoth	UT-MLF	260	---	10	Comp	10/1	31	---	1	0	0	0	75K	FS

TFD – Twin Falls District, BLM    FIF – Fishlake NF    MLF – Manti-La Sal NF

### Northern California Area (PL 2)

New fires: 13  
 New large incidents: 1  
 Uncontained large fires: 1

\* **Marsh**, Santa Clara Unit, Calfire. Nine miles southeast of Clayton, CA. Brush and tall grass. Minimal fire behavior with smoldering. Road closures in effect.

Incident Name	Unit	Size		% Acres	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Acres	Chge				Total	Chge	Crw	Eng	Heli			
* Marsh	CA-SCU	655	---	75	Ctn	8/5	355	---	8	51	3	0	300K	ST
Tucker	CA-MDF	14,150	0	100	Ctn	---	189	-261	1	7	0	0	3.7M	FS

MDF – Modoc NF

### Southern California Area (PL 2)

New fires:	23
New large incidents:	0
Uncontained large fires:	1

**Mill**, Los Padres NF. Previously reported incident. Five miles east of Lucia, CA. Timber, chaparral and tall grass. Minimal fire behavior with smoldering. Area, road and trail closures in effect.

Incident Name	Unit	Size		% Acres	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Acres	Chge				Total	Chge	Crw	Eng	Heli			
Mill	CA-LPF	310	30	49	Ctn	8/5	383	-253	12	16	3	0	3.6M	FS

### Southwest Area (PL 2)

New fires:	17
New large incidents:	0
Uncontained large fires:	2

**Museum**, Coconino NF. One mile north of Flagstaff, AZ. Timber and logging slash. Minimal fire behavior with smoldering. Area, road and trail closures in effect. Precipitation occurred over the fire area yesterday.

**Bagnal**, Apache-Sitgreaves NF. One mile east of Show Low, AZ. Timber and brush. No new information.

Incident Name	Unit	Size		% Acres	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Acres	Chge				Total	Chge	Crw	Eng	Heli			
Museum	AZ-COF	1,961	0	93	Ctn	8/15	78	-25	1	3	1	0	9.5M	FS
Bagnal	AZ-ASF	2,243	---	50	Ctn	8/5	21	---	1	2	0	0	45K	FS

Large Fires Being Managed With a Strategy Other Than Full Suppression Without a Type 1 or 2 IMT Assigned

Castle	AZ-KNF	11,600	0	59	Comp	9/15	159	7	2	10	1	0	3.2M	FS
Huck	AZ-SCA	11,784	---	95	Comp	UNK	10	---	0	2	0	0	150K	BIA
Cedar	AZ-TNF	575	---	90	Comp	8/15	0	---	0	0	0	0	20K	FS
White Springs	AZ-FTA	2,880	---	50	Comp	8/15	2	---	0	0	0	0	500K	BIA
Roberts	NM-CIF	5,020	---	0	Comp	8/30	4	---	0	1	0	0	1.1M	FS
Bear	NM-GNF	832	---	71	Comp	8/10	0	---	0	0	0	0	350K	FS
Newman	AZ-COF	4,907	---	75	Comp	UNK	5	---	0	0	0	0	1M	FS
Black	NM-GNF	1,235	---	74	Comp	UNK	1	---	0	0	0	0	40K	FS
Skid	NM-GNF	165	---	41	Comp	UNK	1	---	0	0	0	0	25K	FS

KNF – Kaibab NF      SCA – San Carlos Agency, BIA      TNF – Tonto NF      FTA – Fort Apache Agency, BIA      CIF – Cibola NF  
GNF – Gila NF

**Rocky Mountain Area (PL 1)**

New fires:	5
New large incidents:	0
Uncontained large fires:	0

Incident Name	Unit	Size		% Acres	Ctn/ Comp	Est	Personnel		Resources			Strc Lost	\$\$ CTD	Origin Own
		Chge	Total				Chge	Total	Crw	Eng	Heli			
Large Fires Being Managed With a Strategy Other Than Full Suppression Without a Type 1 or 2 IMT Assigned														
441	CO-SJF	325	---	10	Comp	8/15	0	---	0	0	0	0	174K	FS
Reveille	CO-PSF	219	---	5	Comp	8/30	4	---	0	0	0	0	2.6M	FS

SJF – San Juan NF PSF – Pike and San Isabel NF

### Fires and Acres Yesterday (by Protection):

Area		BIA	BLM	FWS	NPS	ST/OT	USFS	TOTAL
Alaska Area	FIREs	0	0	0	0	2	1	3
	ACRES	0	0	0	0	0	0	0
Northwest Area	FIREs	2	0	0	1	12	1	16
	ACRES	0	0	0	0	8	2	10
Northern California Area	FIREs	0	0	0	0	12	1	13
	ACRES	0	0	0	0	242	0	242
Southern California Area	FIREs	0	1	0	1	18	3	23
	ACRES	0	0	0	0	2	150	152
Northern Rockies Area	FIREs	3	0	1	0	13	14	31
	ACRES	15	0	0	0	203	240	459
Great Basin Area	FIREs	1	5	0	0	9	17	32
	ACRES	0	614	0	0	45	645	1,304
Southwest Area	FIREs	0	1	0	4	0	12	17
	ACRES	0	1	0	0	0	52	53
Rocky Mountain Area	FIREs	0	1	0	0	2	2	5
	ACRES	0	0	0	0	16	0	16
Eastern Area	FIREs	0	0	0	0	0	1	1
	ACRES	0	0	0	0	0	3	3
Southern Area	FIREs	0	0	0	0	4	0	4
	ACRES	0	0	0	0	88	0	88
<b>TOTAL FIRES:</b>		<b>6</b>	<b>8</b>	<b>1</b>	<b>6</b>	<b>72</b>	<b>52</b>	<b>145</b>
<b>TOTAL ACRES:</b>		<b>15</b>	<b>615</b>	<b>0</b>	<b>0</b>	<b>604</b>	<b>1,093</b>	<b>2,327</b>

### Fires and Acres Year-to-Date (by Protection):

Area		BIA	BLM	FWS	NPS	ST/OT	USFS	TOTAL
Alaska Area	FIREs	0	233	0	0	330	29	592
	ACRES	0	1,648,765	0	0	750,599	10	2,399,374
Northwest Area	FIREs	175	96	8	10	778	316	1,383
	ACRES	9,679	25,355	84	1	2,442	2,853	40,415
Northern California Area	FIREs	13	18	3	2	1,416	179	1,631
	ACRES	11	540	23	1	19,978	15,354	35,908
Southern California Area	FIREs	9	62	7	10	2,152	207	2,447
	ACRES	97	259	2,726	5	13,505	3,396	19,988
Northern Rockies Area	FIREs	576	18	11	2	434	223	1,264
	ACRES	10,226	207	1,424	0	6,498	2,251	20,606
Great Basin Area	FIREs	16	409	3	19	484	221	1,152
	ACRES	20	89,496	1	8	122,038	14,108	225,670
Southwest Area	FIREs	532	153	7	24	458	587	1,761
	ACRES	50,394	5,775	11	1,179	21,847	250,852	330,058
Rocky Mountain Area	FIREs	172	183	1	9	312	173	850
	ACRES	1,343	1,337	5,048	29	14,473	7,907	30,138
Eastern Area	FIREs	301	0	8	29	3,326	271	3,935
	ACRES	569	0	52	520	25,775	5,571	32,487
Southern Area	FIREs	215	0	32	41	11,550	208	12,046
	ACRES	22,199	0	1,458	2,192	187,350	13,100	226,298
<b>TOTAL FIRES:</b>		<b>2,009</b>	<b>1,172</b>	<b>80</b>	<b>146</b>	<b>21,240</b>	<b>2,414</b>	<b>27,061</b>
<b>TOTAL ACRES:</b>		<b>94,538</b>	<b>1,771,734</b>	<b>10,827</b>	<b>3,936</b>	<b>1,164,506</b>	<b>315,402</b>	<b>3,360,943</b>

Ten Year Average Fires (2009 – 2018 as of today)	39,283
Ten Year Average Acres (2009 – 2018 as of today)	4,083,353

\*\*\*Changes in some agency YTD acres reflect more accurate mapping or reporting adjustments.

\*\*\*Additional wildfire information is available through the Geographic Areas at <https://gacc.nifc.gov/>

### Canadian Fires and Hectares

PROVINCES	FIRES YESTERDAY	HECTARES YESTERDAY	FIRES YEAR-TO- DATE	HECTARES YEAR-TO-DATE
BRITISH COLUMBIA	7	10	697	12,689
YUKON TERRITORY	0	0	108	252,877
ALBERTA	4	0	892	869,248
NORTHWEST TERRITORY	3	13,564	135	91,649
SASKATCHEWAN	2	2	222	44,681
MANITOBA	0	0	245	101,416
ONTARIO	9	91	342	264,830
QUEBEC	8	51	238	10,231
NEWFOUNDLAND	5	21	79	712
NEW BRUNSWICK	2	2	145	186
NOVA SCOTIA	2	0	98	126
PRINCE EDWARD ISLAND	0	0	1	9
NATIONAL PARKS	0	0	65	109,803
TOTALS	42	13,741	3,267	1,758,456

\*1 Hectare = 2.47 Acres

**Predictive Services Discussion:** A breezy, westerly flow will continue across Alaska. Areas of rain will remain possible across the southern Interior, as a departing cold front stalls near the Alaska Range. To the south, stronger surges of monsoonal moisture will move northward across the Inland West, as an approaching cold front strengthens the southerly flow. Scattered wet storms are expected along and west of the Continental Divide as far west as central Nevada and eastern Oregon. Isolated storms will also be possible across the central Sierra in California. Southwesterly winds across the Pacific Northwest will become breezy in the afternoon as the front begins to make its approach from the west. In Alaska, another approaching front will bring widespread showers to the Interior of the state. This will assist in fuel moisture recoveries as the state begins to exit fire season.

<http://www.predictiveservices.nifc.gov/outlooks/outlooks.htm>



## Safety Zone Research

*Operational Engagement Category*

*[If you have computer or smart phone access, [please watch the video for this subject](#) using the link or QR code...Otherwise, read on Old School...]*



First, a Fire Behavior 101 refresher: You can warm yourself around the sides of a campfire for quite some time; that's **radiant heat**. If you hold your hands over the top of the fire, you'll get burned relatively quickly; that's **convective heat**.

Basically, wind or slope can tip the flames over, so that the convective heat is no longer going straight up, but is now aimed more along the ground, sending the heat and hot gasses much further ahead. This causes pre heating of the fuels, faster fire spread and greater fire intensities. You'll need a larger Safety Zone if that fire is coming towards you.

The current equation for safety zone size in the [Incident Response Pocket Guide \(IRPG\), PMS 461](#) (page 8) is:

$$4 \times \text{Flame Height} = \text{Safe Separation Distance}$$

To make estimations of flame height though, you either have to use past fire behavior observations or use your experience to guess what the fire may do in the future. After a decade of research, Bret Butler, at the Missoula Technology and Development Center, suggests removing the uncertainty and guesswork that comes with estimating flame height by taking the general rule of thumb: Flame Height = 2 x Vegetation Height ...and substituting that Flame Height equation into the original [IRPG](#) equation, to give:

$$4 \times 2 \times \text{Vegetation Height} = \text{Safe Separation Distance}, \text{ which simplified is:}$$
$$8 \times \text{Vegetation Height} = \text{Safe Separation Distance}$$

But remember, that's still for **radiant heat** only, on flat ground, with no wind. To take into account the **convective heat** from slope or wind, Butler's research suggests that a "Slope Wind Factor" is needed in the equation:

$$8 \times \text{Vegetation Height} \times \text{Slope Wind Factor} = \text{Safe Separation Distance}$$

But what is the Slope Wind Factor? Current research is indicating that the Slope Wind Factor is between 1 and 10; with Butler arguing it may be closer to between 1 and 5. Butler's ongoing research is focused on answering that question by gathering sensor data on fires, running computer simulations, and refining the models...Stay tuned.

In the meantime, utilize the calculations on page 8 of your [IRPG](#) to help you determine a bare minimum size for your safety zone with the understanding that slope and wind need to be considered in your decision making.

But remember, a safety zone is only good if you can get there...join us tomorrow for some thoughts on Escape Routes.

The "Take 5@2" safety messages are a cooperative project of 6 Minutes for Safety, RT 130, Wildland Fire Safety Training Annual Refresher (WFSTAR), NIFC External Affairs, the NWCG Leadership Committee, the NWCG Risk Management Committee, and the Wildland Fire Lessons Learned Center

### References:

[Wildland Fire Safety Training Annual Refresher](#)

[Wildland Fire Lessons Learned Center](#)

[Wildland Fire Leadership Development Program](#)

### Additional Resources:

[Incident Management Situation Report \(IMSR\)](#)

[Incident Response Pocket Guide \(IRPG\), PMS 461](#)

[NWCG Standards for Helicopter Operations, PMS 510](#)

[RT-130, Wildland Fire Safety Training Annual Refresher \(WFSTAR\)](#)

[Interagency Standards for Fire and Fire Aviation Operations \(Red Book\)](#)

[Wildland Fire Lessons Learned Center](#)

**Have an idea? Have feedback? Share it.**