5109.14,20

FSH 5109.14 - INDIVIDUAL FIRE REPORT HANDBOOK, FORM FS-5100-29
WO AMENDMENT 5109.14-95-1
EFFECTIVE 9/5/95
REVISED 06/06/06 GVC

CHAPTER 20 - REPORT PREPARATION

21 - INDIVIDUAL REPORTS. Prepare Form FS-5100-29, Individual Fire Report, for each statistical wildfire and any unplanned ignition managed as a prescribed fire. Section 12 describes which prescribed fires shall be reported. Section 13 outlines procedures for fires that burn on multiple units, spot fires, and multiple ignitions.

22 - PREPARING FORM FS-5100-29, INDIVIDUAL FIRE REPORT. See exhibit 01 for a completed form that documents a wildland fire; exhibit 01 also contains the supplement for large fire acres burned on page 2 of the form (see sec. 23 for direction on completing the supplement). Exhibit 02 contains a completed form for a prescribed fire in a wilderness; the supplement was omitted from exhibit 02 although it must be completed for large fires (sec. 23).

    1. All Wildfires. Complete the entries for the name, location, blocks 1-28, remarks, and submitted/approved. Include the map if required. Complete the large fire acres burned supplement on page 2 of the form if required. Follow coding instructions in sections 22.1 through 22.8, and follow instructions in section 23 for completion of the large fire acres burned supplement.

    2. Prescribed Natural Fires. Complete the entries for location, blocks 1-28 except as noted, remarks, and submitted/approved. Include the map if required. Complete the large fire acres burned supplement on page 2 of the form if required. Fire name, initial suppression strategy, time of initial action, time final suppression strategy attained, forces used, FFF Cost, and NVC are optional but should be coded if applicable. See section 12.1 for additional direction on natural ignition prescribed fires, and section 23 for completion of the large fire acres burned supplement.

    3. Management Ignited Prescribed Fires. Do not report management ignited prescribed fires unless the fire is declared a wildfire. Complete all items required for wildfires in paragraph 1. See section 11.3 for additional direction.

    4. Special Information. Use block 28 to enter specific data required for local, Regional, and national management purposes. Provide reporting and coding instructions for these data through Forest and Regional supplements to this Handbook. Regions shall coordinate assignment and use of these codes locally, and report the code and definitions to national support personnel for inclusion in appropriate data base tables. Data that might be appropriate for reporting in block 28 include wilderness identification, resource-specific fire effects, or special research projects. (See sec. 22.6 for definitions of the nationally defined special codes).

a. National. Code PP (P-Code) is required for D and   larger fires, and recommended for all fires. Identify fires that start in wilderness areas designated by Congress with the WL special code. Some prescribed natural fires may require codes ZA and ZW.

b. Regional. Regions are encouraged to define special codes to collect information in a standard format. Regionally defined codes shall not duplicate or redefine the nationally defined codes in this Handbook, especially cause codes. Regions that desire to collect information that has a national code shall use that code.

c. Local. Local units may define special codes but shall not duplicate or redefine national or Regional codes.

22 - EXHIBITS 01 AND 02 ARE SEPARATE DOCUMENTS.

22.1 - Local Information. The following instructions are for the unnumbered blocks at the top of Form FS-5100-29, Individual Fire Report (sec. 22, ex. 01 and ex. 02).

1. Fire Name. Enter the assigned name of the fire in the spaces allotted. Do not include the word "fire" as part of the name.

Comment: Top of Page

2. Local Fire Number. Enter the local number assigned to the fire. This entry is not retained in the national data base.

Comment: Top of Page

3. Location. Enter a descriptive location if needed, particularly for fires not in public land survey States. This entry is optional and is not retained in the national data base. Township, Range, Section, Subsection, Meridian. (T/R/S/SS/Mer). For fires in the 30 public land survey system States, enter the township, range, section, subsection, and principal ended. The legal location should correspond very closely to the latitude and longitude coordinates.

Comment: Top of Page

a. Township and Range each have 1-3 digits for the township or range number, a full/partial code, and direction (N or S from the base line for township, E or W from the principal meridian for range). Full/partial townships are indicated with the codes below. For example, code township 103 1/2 north as 1032N, and code range 12 East as 0120E.

      0   full township (most common)
      1   1/4 township (very rare)
      2   1/2 township (common in some areas)
      3   3/4 township (very rare)

b. Section must be 1-36.

c. Subsection can be shown to the nearest quarter section (160 acres) or quarter quarter (40 acres). By convention, enter the smallest subdivision first. For example, SWSE means SW quarter of the SE quarter.

d. Principal meridian codes are available in the NIFMID user's guide and from FIRESTAT support personnel. Regions should include the list of principal meridian codes that cover their region in a Regional supplement. **All fires out of GVC are on the Boise, Idaho Meridian which we code as 08.**

22.2 - Identification. (Blocks 1-5 on Form FS-5100-29).

    1. Region, Forest, District ID and SO (Supervisor's) Fire Number. (Block 1). Enter the two-digit region, Forest, and district numbers that identify the reporting unit. The Supervisor's Office assigns the supervisor's fire number when it receives the report. Supervisor's office numbers should be consecutive, without gaps, unless there is a significant local need to do otherwise. Gaps in the numbering sequence often cause future questions over whether or not the fire record for a Forest is complete. This information, combined with the year of discovery, give each fire report a unique identity.

> **Comment:** 1. Fill in the Region/Forest/District and GVC will fill in the SO Fire Number.

    2. Protecting Agency at Origin. (Block 2). Enter the letter code of the agency legally responsible to provide primary protection for the land on which the fire started. For fires that originate on lands under Federal protection, use the appropriate three-letter codes below in block 2. For fires that originate on lands under State, local government, private, or other protection, enter in block 2 the standard two-letter codes listed in the following paragraph 3b.

> **Comment:** 2. Enter the correct code from the list below.

    Codes   Federal Agencies

    USF - USDA Forest Service
    BLM - Bureau of Land Management
    BIA - Bureau of Indian Affairs
    NPS - National Park Service
    FWS - Fish and Wildlife Service
    ARM - DOD Army
    AFS - DOD Air Force
    NAV - DOD Navy
    OTH - Other Federal agency

> **Comment:** 3. Enter the correct code from the list below.

    3. Ownership/State at Origin/County. (Block 3).

    a. Enter the one-digit code that corresponds to land status at the point of origin.

            Codes

        1   National Forest, National Grassland, or Land Utilization Project
        2   State and private lands inside Forest Service protection boundary
        3   Lands outside Forest Service protection boundary
        4   Other Federal lands inside Forest Service protection boundary

    b. Enter the two-letter code for the State or other jurisdiction where the fire started.

AL	Alabama	KY	Kentucky	OH	Ohio
AK	Alaska	LA	Louisiana	OK	Oklahoma
AZ	Arizona	ME	Maine	OR	Oregon
AR	Arkansas	MD	Maryland	PA	Pennsylvania
CA	California	MA	Massachusetts	PR	Puerto Rico
CD	Canada	MX	Mexico	RI	Rhode Island

CO	Colorado	MI	Michigan	SC	South Carolina
CT	Connecticut	MN	Minnesota	SD	South Dakota
DE	Delaware	MS	Mississippi	TN	Tennessee
DC	Dist. of Columbia	MO	Missouri	TX	Texas
FL	Florida	MT	Montana	UT	Utah
GA	Georgia	NE	Nebraska	VT	Vermont
GU	Guam	NV	Nevada	VI	Virgin Islands
HI	Hawaii	NH	New Hampshire	VA	Virginia
ID	Idaho	NJ	New Jersey	WA	Washington
IL	Illinois	NM	New Mexico	WV	West Virginia
IN	Indiana	NY	New York	WI	Wisconsin
IA	Iowa	NC	North Carolina	WY	Wyoming
KS	Kansas	ND	North Dakota		

c. County. Enter the 3-digit Federal Information Processing System (FIPS) county number at the fire origin. County numbers are available in the County table in the Forest Service Atlas, and from FIRESTAT support personnel. The table is too lengthy (nearly 4,000 codes) to reproduce here. Regions or forests should determine which county codes are needed and issue a supplement to this Handbook with those codes.

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CODE	NAME	CODE	NAME	CODE	NAME
001	Ada	031	Cassia	061	Lewis
003	Adams	033	Clark	063	Lincoln
005	Bannock	035	Clearwater	065	Madison
007	Bear Lake	037	Custer	067	Minidoka
009	Benewah	039	Elmore	069	Nez Perce
011	Bingham	041	Franklin	071	Oneida
013	Blaine	043	Fremont	073	Owyhee
015	Boise	045	Gem	075	Payette
017	Bonner	047	Gooding	077	Power
019	Bonneville	049	Idaho	079	Shoshone
021	Boundary	051	Jefferson	081	Teton
023	Butte	053	Jerome	083	Twin Falls
025	Camas	055	Kootenai	085	Valley
027	Canyon	057	Latah	087	Washington
029	Caribou	059	Lemhi		

4. Fire Management Zone. (Block 4). Enter the forest's designator for the National Fire Management Analysis System (NFMAS) Fire Management Zone (FMZ) in which the fire burned. If more than one FMZ is involved, enter the one with the most burned area. Enter 9999 if the fire burned predominantly on non-National Forest land that is not in a FMZ.

Comment: 4. GVC will fill this out until otherwise instructed.

5. Adjoining Forest Report. (Block 5). This block is no longer used, but is still on the form and in the software for compatibility purposes. Data entered by previous versions of FIRESTAT will remain but cannot be updated. See section 13 for direction on special situations.

Comment: 5. Don't need to do this.

22.3 - Occurrence. (Blocks 6-11 on Form FS-5100-29).

    1. Point of Origin. (Block 6). Enter the latitude and longitude at the point of origin. Report degrees in whole numbers and minutes to the nearest tenth. This resolution places the fire within approximately 500 feet of the exact location.

> **Comment:** 6. Aircraft report locations in degrees minutes, decimal minutes. This program asks for degrees, minutes, seconds. Therefore you must convert the aircraft Lat/Long using the chart below.

Lat X Long Conversion
Northern Rockies Protocol is Degrees Decimal Minutes

Seconds	Decimal Minutes	Seconds	Decimal Minutes	Seconds	Decimal Minutes	Seconds	Decimal Minutes	Seconds	Decimal Minutes	Second
01	.02	11	.18	21	.35	31	.52	41	.68	5
02	.03	12	.20	22	.37	32	.53	42	.70	5
03	.05	13	.22	23	.38	33	.55	43	.72	5
04	.07	14	.23	24	.40	34	.57	44	.73	5
05	.08	15	.25	25	.42	35	.58	45	.75	5
06	.10	16	.27	26	.43	36	.60	46	.77	5
07	.12	17	.28	27	.45	37	.62	47	.78	5
08	.13	18	.30	28	.47	38	.63	48	.80	5
09	.15	19	.32	29	.48	39	.65	49	.82	5
10	.17	20	.33	30	.50	40	.67	50	.83	6

> **Comment:** 7.

    2. Time of Ignition. Enter the number of the month and day, the last two digits of the year, and the nearest hour and minute (military time) when the fire started. If the date and/or time are not known for certain, enter the best estimate of the date and time. Times range from 0000 (midnight, beginning of the day) to 2359 (last minute of the day).

> **Comment:** 8.

    3. Time of Discovery. Enter the month, day, year, hour, and minute the fire was discovered. Code times as in block 7. Date and time of ignition and discovery can be identical.

> **Comment:** 9.

    4. Detection Method. Enter the code from the list below that corresponds to the initial detection method.

        Code   Detected By

1   Forest Service Lookout
2   Other Lookout
3   Forest Service Patrol
4   Other Forest Service Employee
5   Planned Cooperator (with whom fire control coop. arrang. exists, excluding aircraft)
6   Forest Service Permittee (persons holding special use, free use, or grazing permits; timber sales and other contracts; their agents and employees)
7   Forest Service Aircraft Observer **(861, 868, Patrol)**
8   Other Aircraft Observer **(747 Boeing, Commercial)**
9   Infrared Detection
0   Other

> **Comment:** 10. Four different numbers to enter…

5. Statistical/General/Specific Cause/Class of People. Enter the cause codes that best describe the actual fire cause.

a. Statistical Cause. Enter the appropriate statistical cause code. Report all fires attributable to railroads or children in those respective categories regardless of the specific fire-starting agent. Code unknown causes as miscellaneous (9).

Code	Statistical Cause
1	Lightning
2	Equipment Use
3	Smoking
4	Campfire
5	Debris Burning
6	Railroad
7	Arson
8	Children
9	Miscellaneous

b. General Cause. Enter the appropriate general cause code to further identify the human activity related to the fire ignition. Code unknown activities and lightning fires as other (0).

Code	General Cause
1	Timber harvest
2	Harvest other products
3	Forest/Range management activities
4	Highway
5	Power, Reclamation
6	Hunting
7	Fishing
8	Other recreation
9	Resident
0	Other

c. Specific Cause. Enter the appropriate specific cause code to further refine and identify the cause. Code unknown causes as other (30).

Code	Specific Cause
01	Lightning
02	Aircraft
03	Burning vehicle
04	Exhaust-Powersaw
05	Exhaust-Other
06	Logging line
07	Brakeshoe
08	Cooking fire

09	Warming fire
10	Smoking
11	Trash burning
12	Burning dump
13	Field burning
14	Land clearing
15	Slash burning
16	Right-of-way burning
17	Resource management burning
18	Grudge fire
19	Pyromania
20	Smoking out bees or game
21	Insect/snake control
22	Job fire
23	Blasting
24	Burning building
25	Powerline
26	Fireworks
27	Playing with matches
28	Repel predatory animals
29	Stove fuel sparks
30	Other

d. Class of People. Enter the appropriate class of people code to identify the person or group involved with a human-caused fire. Code lightning fires as not person-caused (0). Code persons whose status cannot be determined as other (code 8).

Code	Class of People
1	Owner
2	Permittee
3	Contractor
4	Public employee
5	Local permanent
6	Seasonal
7	Transient
8	Other
9	Visitor
0	Not person-caused

6. Unplanned Ignition Designated as Prescribed Fire. If the decision was made to manage the unplanned ignition as a prescribed fire, enter Y (yes). If the ignition was suppressed as a wildfire enter N (no) and continue with block 12. See section 12 for further direction on prescribed fires.

Comment: 11. Yes or No???

1. Initial Suppression Strategy. (Block 12). Enter the appropriate code for the predominant strategy (confine, contain, or control) that was used as a basis for the kind, amount, and timing of the initial dispatch and initial suppression action.

Comment: 12.

Code   Strategy

(1)   Confine. To limit fire spread within a predetermined area principally by use of natural or preconstructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions.

(2)   Contain. To surround a fire and any spot fires there from with control line, as needed, that can reasonably be expected to check the fire's spread under prevailing and predicted conditions.

(3)   Control. To complete the control line around a fire, any spot fires there from, and any interior islands to be saved; to burn out any unburned area adjacent to the fire side of the control line; and to cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions.

2. Escaped Fire. Enter N (no) if the planned suppression strategy for the fire was achieved by the planned initial action/first reinforcement forces; enter Y (yes) if the fire was declared an escaped fire. An escaped fire is a fire that has exceeded, or is anticipated to exceed, preplanned initial action capabilities, fire management direction, or selected appropriate suppression response.

Comment: 13. Yes or No?

3. Time of Initial Action. Enter the month, day, year, hour, and minute that initial suppression action was started at the site of the fire. **This time must be at least one minute after discovery.** For confinement/surveillance fires, enter time of first surveillance. Code time as in block 7.

Comment: 14.

4. Time Final Suppression Strategy Attained. (Block 15). Enter the month, day, year, hour, and minute that the initial suppression strategy in block 12 was achieved. Code time as in block 7. At least one minute must elapse from time of initial action to suppression strategy attained. If this is an escaped fire, enter the date and time the final suppression strategy from the escaped fire situation analysis was attained.

Comment: 15.

5. Time Fire Out. Enter the month, day, year, and nearest hour and minute that the fire was declared out. Code time as in block 7. **At least one minute must elapse between suppression strategy attained and fire out.**

Comment: 16.

6. Forces Used up to Time of Attainment of Initial Action Strategy or Escape. Enter the codes for and the quantities of suppression forces used up until the initial selected suppression strategy was attained, or, if this is an escaped fire, until the time the fire escaped. Use the Incident Command System (ICS) terminology and resource module types (FSH 5109.32a, Fireline Handbook, Appendix A). Do not enter data on aircraft other than air tankers and helicopters used to drop water or retardant. Note that ICS types do not distinguish between permanent tanks and external buckets for helicopters.

Comment: 17.

List individual components of strike teams. Do not count personnel who are already included in an ICS module. For example, if a D1 code is entered for a type 1 dozer, do not code the

two accompanying personnel as separate individuals. Code non-ICS type crews as P1, with the number of persons in each shown under quantity. If more forces were used than space permits for data entry, consolidate forces by type. Smokejumpers, helitack, and rappel personnel delivered by aircraft should use codes P2-P4 as appropriate. However, firefighters such as smokejumers delivered to a fire by ground vehicle would be coded as P1 resources.

Engines are typed based on tank size, pump capacity, hoses, and other factors. Descriptions below show tank size in gallons and pump capacity in gallons per minute separated by a slash. To record water tenders, use the M1 classification; most water tenders do not qualify as engines under ICS rules due to pump size, hose capacity, and other factors.

Code	Class of Forces	ICS Type	Unit of Measure	Description
A1	Air Tanker	1	each aircraft	3000 gallon
A2		2		1800 gallon
A3		3		600 gallon
A4		4		100 gallon
H1	Helicopter	1	each aircraft	700 gallon
H2		2		300 gallon
H3		3		100 gallon
H4		4		75 gallon
E1	Engine (with crew)	1	each module	1-400 g/1000 gpm
E2		2		2-400 g/500 gpm
E3		3		3-300 g/500 gpm
E4	4	4		4-750 g/70 gpm
E5		5		5-500 g/50 gpm
E6		6		6-200 g/50 gpm
E7		7		7-125 g/20 gpm
E9	Patrol	-		
D1	Dozer/Plow (with crew)	1	each module	170 HP
D2		2		93 HP
D3		3		65 HP
C1	Crew (Category 1)	1	each crew	
C2	Crew (Category 2)	2		
P1	Suppression Pers. (Misc.)	-	each person	
P2	Smoke jumper (via para.)	-		
P3	Helitack (via heli.)	-		
P4	Rappeller (via heli.)	-		
M1	Misc., not listed above	-	not applicable	

Following each forces class code, enter an F for Forest Service or a C for all other cooperators.
Next, enter the quantity. If the quantity for a single block exceeds 99, record 99.
If no forces were used (confinement/surveillance), enter M1/F/99.

22.5 - Description.

1. Estimated FFF Cost. Enter the estimated total emergency fire fighting funds (FFF) expended by the Forest Service as a result of this fire. For smaller fires, develop costs based on current wage rates and approximate hours charged and equipment contract or use rates. For project fires use estimated FFF costs from the final Incident Status Summary, Form FS-5100-11. Enter the amount in whole dollars. **Decimals are not allowed in this field.**

> **Comment:** 18. Remember this is an ESTIMATE but an important one. So take the time to use the worksheet on the next page. Use the Codt

2006 Costs

GS Level	Basetime	Base w/ Hazard	Overtime	OT w/Hazard
1	$7.84	$9.80	$11.76	$14.70
2	$8.81	$11.01	$13.22	$16.53
3	$9.61	$12.01	$14.42	$18.03
4	$10.79	$13.49	$16.19	$20.24
5	$12.07	$15.09	$18.11	$22.64
6	$13.46	$16.83	$20.19	$25.24
7	$14.95	$18.69	$22.43	$28.04
8	$16.56	$20.70	$24.84	$31.05
9	$18.29	$22.86	$27.44	$34.30
10	$20.14	$25.18	$30.21	$37.76
11	$22.13	$27.66	$30.21	$37.76
12	$26.53	$33.16	$30.21	$37.76
13	$31.54	$39.43	$31.54	$39.43
14	$37.28	$46.60	$37.28	$46.60
15	$43.85	$54.81	$43.85	$54.81

Daily Aircraft costs can usually be obtained from the Helicopter Manager and the Air Tanker Base. You usually do not have to use the estimates listed above.

RESOURCE	DAILY COST
WILDLAND ENGINE TYPE III	1,493
WILDLAND ENGINE TYPE IV	1,312
WILDLAND ENGINE TYPE V	1,261
WILDLAND ENGINE TYPE VI	1,209
WILDLAND ENGINE TYPE VII	992
DOZER TYPE I	1,904
DOZER TYPE II	1,316
DOZER TYPE III	966
MOTOR GRADERS W/ OPERATOR	1,106
PICKUP TRUCK (4 X 2)	66
PICKUP TRUCK (4 X 4)	73

AIRCRAFT SUPPORT	HOURLY COST
HELICOPTER TYPE I (214)	1,690
HELIO TYPE II (204, 205, 212)	990
HELIO TYPE III (500-D, 206)	500
AIR TANKER (P3 - 3,000 GAL)	3,154
AIR TANKER (P2V - 2,450 GAL)	2,577
AIR TANKER (DC-4 - 2,000 GAL)	2,044
LEAD / RECON PLANE	500

FFF Fire Cost Worksheet

Fire Name_____   District Fire Number_____

Employees	Basetime			Overtime			Basetime w/ Hazard			Overtime w/ Hazard			
	Wages	Hours	Total	Wages	Hours	Total	Wages	Hours	Total	Wages	Hours	Total	

Employee Total Cost   _____

Resources							Flight Cost	# of Flights	Total	Engine Cost	Miles	Total	

Resources Total Cost   _____

Total Cost of Fire _____

2. FMZ NVC per Acre. Enter the average per acre net resource value change (NVC) developed for the National Fire Management Analysis System (NFMAS) for the Fire Management Zone (FMZ; block 4), and the predominant fire intensity level in which the fire burned. Enter damages (losses) as a positive number and benefits with a negative (-) sign. Do not recalculate or include fire effects or NVC for this specific fire.

Where a fire burns significant acreage in each of two or more FMZ's, calculate and enter a weighted average per acre NVC based on the NFMAS average NVC and the acreage burned in each. Forests that have not developed NVC tables for use in NFMAS must obtain and use NVC data applicable to the area from the National Forest(s) that represent them. Enter the average per acre NVC in whole dollars; decimal fractions (cents) are not allowed in this field.

If the fire occurred on non-National Forest lands and the block 4 (FMZ) entry is 9999, enter 0 (zero) in block 19.

3. FS Acres (All Forests). Enter the acres of Forest Service lands burned on all forests. See section 13 for guidance on responsibilities of reporting and adjacent forests.
If the fire involves less than one acre, report to the nearest tenth of an acre. If the fire involves one acre or more, report to the nearest whole acre. The minimum fire size is 0.1 acres.

4. Non-FS Acres Protected by FS. Enter the acres of non-National Forest System lands protected by the Forest Service (also known as other acres inside) within the fire perimeter. Code as in block 20.

5. Acres Outside FS Protection. Enter the acres outside Forest Service protection within the fire perimeter. Code as in block 20.

The total National Forest System statistical acres burned are calculated automatically from blocks 20 and 21 when the data are input to the data base entry program. Block 22 acres are not included in National Forest System statistics but are counted in the total fire size.

6. Fire Intensity Level. Enter the fire intensity level (FIL) code for the predominant or typical sustained flame length observed at the head of the fire during the initial attack. Fires that do not spread appreciably beyond the point of ignition, such as piles or a lightning fire in a single tree, should generally be coded FIL 1 regardless of the observed flame lengths since they are not spreading fires.

Code (FIL)	Flame Length (feet)
1	0 - 2
2	2.1 - 4
3	4.1 - 6

4	6.1 - 8
5	8.1 - 12
6	12 plus

7. Representative Weather Station. Enter the six-digit identifier that corresponds to the weather station from which specific weather data related to the fire can be obtained for further evaluation purposes. The weather station should represent conditions similar to those at the fire site. The closest station may not necessarily represent the fire site.

<div style="margin-left: auto; margin-right: auto; width: fit-content;">

100603	POTLATCH
100606	SHOCK
100708	KELLY
100708	KELLY
100711	PIERCE
100711	PIERCE
100714	DENT
100714	DENT
100799	MARIAH
101013	FENN
101019	HELLS HALF ACRE
101028	MOOSE CREEK
101028	MOOSE CREEK
101031	POWELL
101031	POWELL
101031	POWELL
101037	SLATE CREEK
101037	SLATE CREEK
101045	RED RIVER
101311	SKULL
101311	SKULL
101311	SKULL
242907	WESTFK
242907	WESTFK
242907	WESTFK
242907	WESTFK

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8. NFDRS Fuel Model/Cover Type.

    a. Enter the one-letter code of the prevailing National Fire Danger Rating System (NFDRS) fuel model in which the fire was burning at the same time and place that the Fire Intensity Level (block 23) was observed. Valid codes are letters A-L and N-U. An additional code X may be used to designate fires burning in non-vegetative fuels when there is a significant separation from wildland fuels. Examples include burning buildings, and vehicles on paved roadways.

Comment: 24. Use the weather station closest to the fire that has a similar elevation.

Comment: 25.

Code	Description
A	Annual grasses
B	Mature brush
C	Open pine with grass
D	Southern rough
E	Hardwood litter (fall)
F	Intermountain west brush
G	West coast conifers
H	Short needle conifers
I	Heavy slash
J	Intermediate slash
K	Light slash
L	Perennial grasses
N	Saw/march grasses
O	High pocosin
P	Southern long-needle pine
Q	Alaska black spruce
R	Hardwood litter (summer)
S	Tundra
T	Sagebrush with grass
U	Western long-leaf pine.

Fuel Model G	Fuel Model G is used for dense conifer stands where there is a heavy accumulation of litter and downed woody material. Such stands are typically overmature and may also be suffering insect, disease, wind, or ice damage -- natu events that create a very heavy buildup of dead material on the forest floor. The duff and litter are deep and much the woody material is more than 3 inches in diameter. The undergrowth is variable, but shrubs are usually restricte openings. Types meant to be represented by Fuel Model G are hemlock-Sitka spruce, Coast Douglas-fir, and windthrown or bug-killed stands of lodgepole pine and spruce.
Fuel Model H	The short-needled conifers (white pines, spruces, larches, and firs) are represented by Fuel Model H. In contrast tc Model G fuels, Fuel Model H describes a healthy stand with sparse undergrowth and a thin layer of ground fuels. Fires in H fuels are typically slow spreading and are dangerous only in scattered areas where the downed woody material is concentrated.
Fuel Model I	Fuel Model I was designed for clear-cut conifer slash where the total loading of materials less than 6 inches in diam exceeds 25 tons/acre. After settling and the fines (needles and twigs) fall from the branches, Fuel Model I will overrate the fire potential. For lighter loadings of clear-cut conifer slash, use Fuel Model J, and for light thinnings a partial cuts where the slash is scattered under a residual overstory, use Fuel Model K.
Fuel Model J	This model complements Fuel Model I. It is for clearcuts and heavily thinned conifer stands where the total loadin materials less than 6 inches in diameter is less than 25 tons/acre. Again, as the slash ages, the fire potential will be overrated.
Fuel Model K	Slash fuels from light thinnings and partial cuts in conifer stands are represented by Fuel Model K. Typically the sl: is scattered about under an open overstory. This model applies to hardwood slash and to southern pine clearcuts where the loading of all fuels is less than 15 tons/acre.
Fuel Model R	This fuel model represents the hardwood areas after the canopies leaf out in the spring. It is provided as the off-season substitute for E. It should be used during the summer in all hardwood and mixed conifer-hardwood stands where more than half of the overstory is deciduous.
Fuel Model T	The bothersome sagebrush-grass types of the Great Basin and the Intermountain West are characteristic of T fuels. The shrubs burn easily and are not dense enough to shade out grass and other herbaceous plants. the shrubs must occupy at lease one-third of the site or the A or L fuel models should be used. Fuel Model T might be used for immature scrub oak and desert shrub associations in the West, and the scrub oak-wire grass type in the Southeast.

b. Enter the two-digit code for the general cover type in which the fire burned during the initial attack. Each Region shall identify the cover types to be reported and assign a two-digit numerical code to each in a supplement to this Handbook. If possible, the Regional code should identify both cover type and the conditions within that type that are significant to fire protection activities, such as cutover, seedling and saplings, bug-killed pole stand, thinning slash, and so forth.

Douglas-fir			Western White Pine	
seedling-sapling	01		seedling-sapling	51
pole timber	02		pole timber	52
mature (uncut)	03		mature (uncut)	53
cutover (slash disposal completed)	04		cutover (slash disposal completed)	54
cutover (slash disposal incomplete)	05		cutover (slash disposal incomplete)	55
thinning slash	06		thinning slash	56
Larch/Douglas-fir			Lodgepole Pine	
seedling-sapling	11		seedling-sapling	61
pole timber	12		pole timber	62
mature (uncut)	13		mature (uncut)	63
cutover (slash disposal completed)	14		cutover (slash disposal completed)	64
cutover (slash disposal incomplete)	15		cutover (slash disposal incomplete)	65
thinning slash	16		thinning slash	66
Grand fir/Larch/Douglas-fir			Engelmann Spruce	
seed-sapling	21		seedling-sapling	71
pole timber	22		pole timber	72
mature (uncut)	23		mature (uncut)	73
cutover (slash disposal completed)	24		cutover (slash disposal completed)	74
cutover (slash disposal incomplete)	25		cutover (slash disposal incomplete)	75
thinning slash	26		thinning slash	76
Ponderosa Pine			Western Cedar/Hemlock	
seedling-sapling	31		seedling-sapling	81
pole timber	32		pole timber	82
mature (uncut)	33		mature (uncut)	83
cutover (slash disposal completed)	34		cutover (slash disposal completed)	84
cutover (slash disposal incomplete)	35		cutover (slash disposal incomplete)	85
thinning slash	36		thinning slash	86
Ponderosa Pine/Larch/Douglas-fir			Subalpine	91
seedling-sapling	41			
pole timber	42		Deciduous	92
mature (uncut)	43			
cutover (slash disposal completed)	44		Brush	93
cutover (slash disposal incomplete)	45			
thinning slash	46		Grass/Weeds	94
			Grass/Sage	95

9. Aspect/Slope.

a. Enter the code for the general aspect on which the fire was burning at the time of initial suppression action.

Code	Aspect
1	North
2	Northeast
3	East
4	Southeast
5	South
6	Southwest
7	West
8	Northwest
9	Ridgetop
0	Flat

b. Enter the slope percent at the fire origin. This entry replaces the WS special code used previously.

10. Elevation (feet in hundreds). (Block 27). Enter the elevation at the head of fire at initial action stage in hundreds of feet (example: code 3840 feet as 38). Elevations must be in the range of 000 (sea level) to 203 (slightly higher than Mt. McKinley). Decimal fractions are not allowed.

22.6 - Options. The Special Code fields (Block 28 on Form FS-5100-29) allow coding of data not recorded elsewhere on the report. Form a special code with a two-letter identifier and a numerical value. The identifier categorizes the type of data coded. The value field is a whole number for the block coded; it must not contain any letters, decimals, or special characters.

The special code should identify a broad data category (such as wilderness area) with the special code identifier, and then define a set of values for the value field. Up to 12 special codes may be reported for each fire. For example, special code WL identifies wildernesss, and the value 49 means Bob Marshall Wilderness. Follow instructions in forest and Regional supplements to this Handbook for blocks to report and the appropriate codes to use for each. See also section 22, paragraph 4 for further direction on special information.

Units that desire to collect additional data shall not substitute local codes for the national codes defined in this section. National codes are defined so that local units can collect data in a consistent manner. Units that define special codes for Regional or local use shall send a definition of the code and related values to national FIRESTAT support personnel to enable proper handling of the special codes during data base loading operations.

1. Ignitions Code (IG). This code identifies the number of multiple ignition points within the fire perimeter. This code is optional.

Code   Definition
IG   Ignition sites

Enter the number of separate ignitions that are contained within the fire perimeter. This code may be used only when the number of separate ignitions is more than one.

2. Fire Accounting Code (PP). This code ties the fire report to the Forest Service fire accounting code assigned to one or more fires. This code is required for all D class and larger fires, and is recommended for all fires. Use this code for fires assigned a reimbursable account. Up to four accounting codes are allowed to handle situations where several accounting codes are used over the life of the fire. Accounting codes for other agencies can also be entered within the five-character field limit.

Code   Definition
PP   Fire Accounting Project Code

Enter the 5-digit value without the leading "P" or "R." For example, if the accounting code assigned to the fire was P71503, enter special code PP with a value of 71503.

3. Wilderness Code (WL). This code identifies fires that burn in designated wilderness areas. Only fires that occur within the wilderness boundaries after congressional designation may use this code.

Code   Definition
WL   Wilderness area

Region 1
Adm

Unit	Forest	State	Wilderness	ID
0102	Beaverhead NF	MT	Anaconda-Pintlar	47
0102	Beaverhead NF	MT	Lee Metcalf	188
0103	Bitterroot NF	MT	Anaconda-Pintlar	47
0103	Bitterroot NF	ID	Frank Church-River of No Return	136
0103	Bitterroot NF	ID	Selway-Bitterroot	44
0103	Bitterroot NF	MT_	Selway-Bitterroot	44
0104	Kaniksu NF	MT	Cabinet Mountains	50
0104	Kaniksu NF	WA	Salmo-Priest	239
0105	Clearwater NF	ID	Selway-Bitterroot	44
0108	Custer NF	MT	Absaroka-Beartooth	131
0109	Deerlodge NF	MT	Anaconda-Pintlar	47
0110	Flathead NF	MT	Bob Mars .hall	49
0110	Flathead NF	MT	Great Bear	135
0110	Flathead NF	MT	Mission Mountains	52
0111	Gallatin NF	MT	Absaroka-Beartooth	131
0111	Gallatin NF	MT	Lee Metcalf	188
0112	Helena NF	MT	Gates of the Mountains	51
0112	Helena NF	MT	Scapegoat	90
0114	Kootenai NF	MT	Cabinet Mountains	50-
0115	Lewis & Clark NF	MT	Bob Marshall	49
0115	Lewis & Clark NF	MT	Scapegoat	90
0116.	Lolo NF	MT	Rattlesnake	137
0116	Lolo NF	MT	Scapegoat	90
0116	Lolo NF	MT	Selway-Bitterroot	44
0116	Lolo NF	MT	Welcome Creek	123
0117	Nez Perce NF	ID	Frank Church-River of No Return	136
0117	Nez Perce NF	ID	Gospel Hump	122
0117	Nez Perce NF	ID	Hells Canyon	92
0117	Nez Perce NF	ID	Selway-Bitterroot	44

4. Declared Wildfire Initial Acres (ZA). This code identifies the fire size in acres when a prescribed natural fire was declared a wildfire.

    Code   Definition
     ZA   Fire size when declared a wildfire

    Enter the fire size in whole acres when the prescribed fire was declared a wildfire. For example, if a fire was 0.4 acres, enter zero (0). If the fire was 1023 acres, enter 1023. If a fire was greater than 99,999 acres when declared a wildfire, enter 99999.

5. Fire Contained Date (ZC). This code identifies the month and date a wildfire or prescribed fire was declared contained. This date code should be used only for large fires that span several days. The default time of 1200 is assigned.

    Code   Definition
     ZC   Date declared contained

    Enter the 2-digit month number and the 2-digit date the fire was contained. Use leading zeros on month and date if necessary. For example, if a fire was contained on August 19, enter 0819. The year is calculated based on other data fields.

6. Total Resource Damage (ZD). This code identifies total resource damage on National Forest System Lands determined by analysis. This total is not the NVC value (block 19) times acres burned. This code should be used only for large fires that have significant resource damage.

    Code   Definition
     ZD   Total resource damage in ten thousand dollar
increments

    Enter the total resource damage determined by analysis in $10,000 increments. For example, if a fire damaged $4,999 in resources, enter zero (0). If the fire damaged $10,000,000, enter 1000. The maximum codable value is $999.99 million (enter as 99999).

7. Declared Wildfire Date (ZW). This code identifies the month and date a prescribed fire (either natural or management ignited) was declared a wildfire. The default time of 1200 is assigned.

    Code   Definition
     ZW   Date declared wildfire

    Enter the 2-digit month number and the 2-digit date the prescribed fire was declared a wildfire. Use leading zeros on month and date if necessary. For example, if a fire was declared a wildfire on August 23, enter 0823. The year is calculated based on other data fields.

22.7 - Remarks and Submitted/Approved. (Blocks at bottom of Form FS-5100-29)

> **Comment:** Remarks
> It is nice to enter the IC here.

1. Remarks. Enter any information needed to clarify and explain the fire situation or document additional pertinent facts not recorded elsewhere in the form. Remarks are for local information only, and are not included in the data base.

2. Submitted/Approved. Follow instructions in forest or Regional supplements to this Handbook on required local documentation of report preparation, review, and approval.

> **Comment:** Submitted should be Ranger Approved should be Dennis Crew.

22.8 - Map. Attach a map to the local file copy of the FS-5100-29 as required by forest or Regional instructions, or when appropriate for future reference for activities resulting from the fire such as legal proceedings, post-fire evaluations, or timber management prescriptions.

> **Comment:** Map
> Required on E and larger fires, and nice for small ones too.

All E class and larger fires shall include a map as a part of the official fire record for historical purposes. Regions may require maps for smaller fires by Regional supplement.

> **Comment:** This bottom section is only for large fires where acres are on different protecting and ownership areas.

23 - SUPPLEMENT FOR LARGE FIRE ACRES BURNED.
(Blocks on page 2 of Form FS-5100-29).

Data must be entered for all size class C (10 acres) and larger fires. Data for A and B class fires may be entered at local option. See section 13 for direction on which Forest Service unit is responsible for preparing this supplement.

23.1 - General Instructions.

1. The acres entered must total as follows:

    a. The sum of acres on the supplement must equal the Total Acres Burned.

    b. Forest Service acres from block 20 must equal the sum of all lines with USF as owner.

    c. Non-FS acres under FS protection (other acres inside) from block 21 must equal the sum of acres where USF protects the land and USF is not the owner.

    d. Other acres outside FS protection from block 22 must equal the sum of acres where USF does not appear as either protection agency or owner.

2. Examples of several situations follow:

    a. Example 1: A fire began on forest 0701, burned 1 FS acre, and spread onto forest 0702 where it burned 1,499 FS acres. Because the origin is on forest 0701, that forest is responsible for the fire report.

    Total Fire Acres (all ownerships): 1,500.0
    FS Acres (all forests):   1,500.0
    Non-FS acres protected by FS: 0.0
    Acres outside FS protection: 0.0

```
Prot
Agency   FS Unit   Ownership Acres

 USF    07/01    USF     1.0 (Reporting Unit)
 USF    07/02    USF     1,499.0

 Total Fire Acres          1,500.0
```

b. Example 2: A 1,500-acre fire burned 100 acres of NFS land. The remaining 1,400 acres burned in two states: 100 acres are owned/managed by the Michigan Department of Natural Resources and 1,200 acres are in private ownership. The fire also burned 100 acres of private timber lands in Wisconsin.

```
Total Fire Acres (all ownerships):  1,500.0
FS acres (all forests):            100.0
Non-FS acres protected by FS:        0.0
Acres outside FS protection:      1,400.0

Prot
Agency   FS Unit   Ownership Acres

 USF    07/01    USF     100.0 (Reporting Unit)
 WI            PVT     100.0
 MI            MI      100.0
 MI            PVT     1,200.0

 Total Fire Acres          1,500.0
```

c. Example 3: A fire burned 1,500 acres. 101 acres were private lands in Michigan under FS protection (no National Forest System lands were burned). The remaining 1,399 acres burned in two states: 50 acres were owned/managed by the Michigan Department of Natural Resources, 1,249 acres were private lands in Michigan, and 100 acres burned on private lands located in Wisconsin that are not under organized fire protection.

```
Total Fire Acres (all ownerships)  1,500.0
FS acres (all forests):            0.0
Non-FS acres protected by FS:      101.0
Acres outside FS protection:     1,399.0

Prot
Agency   FS Unit   Ownership    Acres

 USF    07/01    PVT     101.0 (Reporting Unit)
 NOP           PVT     100.0
 MI            MI      50.0
 MI            PVT    1,249.0
```

Total Fire Acres   1,500.0

    d. Example 4: The Forest Service responded to a 1,500- acre fire which threatened Forest Service land but burned entirely on lands under State or unknown protection. 1,200 acres burned on lands without an identified protection agency. 300 acres burned on private lands in the State of Washington. The first Forest Service unit on the scene is responsible for the Form FS-5100-29.

Total Fire Acres (all ownerships): 1,500.0
FS acres (all forests):   0.0
Non-FS acres protected by FS: 0.0
Acres outside FS protection: 1,500.0

Prot
Agency   FS Unit   Ownership Acres

NOP   PVT   1,200.0
WA   PVT   300.0

Total Fire Acres   1,500.0

    e. Example 5: A fire burned 500 acres of private lands protected by the Forest Service and 1,000 acres on Forest Service lands protected by the state of California.

Total Fire Acres (all ownerships): 1,500.0
FS acres (all forests):   1,000.0
Non-FS acres protected by FS: 500.0
Acres outside FS protection: 0.0

Prot
Agency   FS Unit   Ownership Acres

USF   05/01   PVT   500.0 (Reporting Unit)
CA   05/01   USF   1,000.0

Total Fire Acres   1,500.0

    f. Example 6: A fire began on forest 0214 and burned 5,000 acres of FS land and 2,500 acres of private land protected by the forest. The fire then entered Yellowstone NP where it burned 150,000 acres before crossing over the boundary and burning 25,000 acres of a state park in Wyoming as well as 25,000 acres of private ranch land. The fire also burned 17,500 acres of land in Montana: 6999 acres were private land with no protection agreements with local, State, or Federal entities, 1 acre burned in a rest area outside any protection district, and 10,500 acres burned on private lands. Forest 0403 lost 75,000 acres within its protection boundary, of which 5,000 acres were Bureau of Land Management and 10,000 acres were private lands. Forest 0415 lost v 100,000 acres within its protection boundary: 15,000 acres were private, 5,000 acres were in a national monument, and 80,000 were regular forest lands.

Total Fire Acres (all ownerships): 400,000.0
NFS acres (all forests):   145,000.0
Non-FS acres protected by FS: 37,500.0
Acres outside FS protection: 217,500.0

Prot
Agency   FS Unit   Ownership   Acres

Prot Agency	FS Unit	Ownership	Acres	
USF	02/14	USF	5,000.0	(Reporting Unit)
USF	02/14	PVT	2,500.0	
NPS		NPS	150,000.0	
USF	04/03	USF	60,000.0	
USF	04/03	BLM	5,000.0	
USF	04/03	PVT	10,000.0	
USF	04/15	USF	80,000.0	
USF	04/15	PVT	15,000.0	
USF	04/15	NPS	5,000.0	
WY		WY	25,000.0	
WY		PVT	25,000.0	
NOP		PVT	6,999.0	
NOP		MT	1.0	
MT		PVT	10,500.0	

Total Fire Acres   400,000.0

g. Example 7: A 66,000-acre fire burned lands on three national forests in 2 Regions. The fire began on forest 0114 and burned 10,000 acres of Forest Service lands, 2,500 acres of private land under FS protection, 2,000 acres of State of Idaho lands under FS protection, and 3,000 acres of Bureau of Land Management lands under FS protection. In addition, the fire burned 5,000 acres of Idaho State protected private lands. The fire also burned onto forest 0616 and burned 25,000 acres of FS lands, 2,500 acres of private lands under FS protection, 5,500 acres protected by the State of Oregon, and 10,000 of scabland under no protection in Oregon. The fire was controlled after moving onto forest 0614 and burning an additional 500 acres.

Total Fire Acres (all ownerships):   6,000.0
NFS acres (all forests):   5,500.0
Non-FS acres protected by FS: 10,000.0
Acres outside FS protection: 20,500.0

Prot
Agency   FS Unit   Ownership Acres

Prot Agency	FS Unit	Ownership	Acres	
USF	01/14	USF	10,000.0	(Reporting unit)
USF	01/14	PVT	2,500.0	
USF	01/14	ID	2,000.0	
USF	01/14	BLM	3,000.0	
ID		PVT	5,000.0	

USF	06/16	USF	25,000.0
USF	06/16	PVT	2,500.0
OR		PVT	5,500.0
NOP		PVT	10,000.0
USF	06/14	USF	500.0

| Total Fire Acres | | | 66,000.0 |

23.2 - Acres by Protection Agency and Landowner Group. Enter one or more lines of data to describe the land protection and land ownership pattern within the fire perimeter. The examples in section 23.1 show ways to code the lands within the fire perimeter.

   1. Protection Agency. Enter the agency or state code for protection agency from the codes in section 22.2, paragraphs 2 and 3a, for the lands included on a particular data line. The additional code, NOP - No Organized Protection, may also be used in this field.

   2. FS Unit. Enter the Forest Service Region and forest on any line where Protection Agency or Landowner is USF. Leave this field blank for any other codes.

   3. Landowner. Enter the code for agency, State, or landowner group that describes who owns the lands protected by the protection agency. Use the codes in section 22.2, paragraphs 2 and 3a. The additional code, PVT - Private landowner, may also be used in this field.

   4. Acres. Enter the fire area in acres uniquely defined by protection agency, Forest Service unit, and landowner.