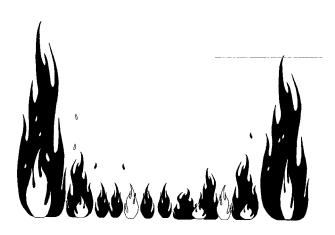
U.S. FISH AND WILDLIFE SERVICE

Individual Fire Report Instructions (DI-1202)



June 1997

UNITED STATES DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE INDIVIDUAL FIRE REPORT INSTRUCTIONS FOR USE WITH DI-1202

GENERAL DI-1202 INSTRUCTIONS

- 1. The fire reporting process will be done by data entry into the computer. A fire number will automatically be assigned to the fire.
- 2. Report and record each individual fire on a separate form.
- 3. <u>DO NOT ENTER ZEROS</u> to the left of significant numbers except where indicated as part of the code entry.
- 4. Each Fire Report is to be entered into the FMIS computer system within **20 days** after the fire has been declared out.
- 5. An original hard copy needs to be kept on file because FMIS cannot capture the map and signature at this time.
- 6. A narrative for each fire will be included in the Remarks section. Other items that require clarification are also reported in this section.
- 7. <u>DO NOT</u> use more digits than are indicated by dashes on the form.
- 8. Enter only the code numbers, except as specified in the Specific Instructions.
- 9. Enter the **MANDATORY** data for the following type fires:

FIRE TYPE 1 (SUPPRESSED FIRE)

ltem	Description	Item	Description		
1	Status Code	9e	Cost Code		
2-3d	Header	9f	Ownership at Origin		
4a-b	Fire Type	9g	Fiscal Year		
5	Cause	10a	Discovery: date/time/type/acres		
6	People	10b	Initial Attack: date/time/type/amt/acres		
*8a	State	10c	Control: date/time/acres		
*8b	Owner	11a	Topography		
*8c	Vegetative Type	11b Aspect			
*8d	Acres	11c	Slope		
*8d	Acres	11d	Elevation		
9a	Fire Name	11g	Fire Behavior		
9b	Area Name	* <u>8a-8d Repeats (up to 8 of State,</u>			
9c	Latitude/Longitude	<u>Owner, Vegetative Type, Acres)</u> as needed.			
	All other items are optional.				

All other items are optional.

FIRE TYPE 2 (NATURAL OUTS)

ltem	Description	Item	Description
1	Status Code	10a	Discovery: date/time/type/acres
2-3d	Header	10d	Declared Out: date
4a-b	Fire Type	11a	Topography
5	Cause (if known)	11b	Aspect
*8a	State	11c	Slope
*8b	Owner	11d	Elevation
*8c	Vegetative Type		
*8d	Acres		
9a	Fire Name	* <u>8a-8</u>	d Repeats (up to 8 of State,
9c	Latitude/Longitude	<u>Own</u>	er, Vegetative Type, Acres) as needed
9e	Cost Code		
9f	Ownership at Origin		
0~	Eigenl Voor	All other ite	me are ontional

9g Fiscal Year

All other items are optional.

FIRE TYPE 3 (SUPPORT ACTIONS)

ltem	Description	ltem	Description
1	Status Code	9a	Fire Name
2-3d	Header	9e	Cost Code
4a-b	Fire Type: (Must always be 37)	9f	Fiscal Year
8a	State	9h	Fiscal Data
8b	Owner	10a	Discovery: date
			_

All other items are optional.

FIRE TYPE 48 (PLANNED IGNITION)

ltem	Description	ltem	Description
1	Status Code	9h	Agency Fiscal Data
2-3d	Header	10a	Discovery: date/time
4a-b	Fire Type	10c	Controlled: acres
*8a	State	10d	Declared Out: date
*8b	Owner	11a-d	Site Data
*8c	Vegetative Type	11e	NFDRS Station (if available)
*8d	Acres	11f	MSGC (if 11e is completed)
9a	Fire Name	11h	BI (if 11e is completed)
9b	Area Name	13c	Plot Objective
9c	Latitude/Longitude	13d	Firing Type
9f	Ownership	13e	Cost/Acre
9g	Fiscal Year		

All other items are optional.

*8a-8d may be repeated up to 8 times if needed.

FIRE TYPE 49 (UNPLANNED IGNITION)

Item Description

- 1 Status Code
- 2-3d Header
- 4a-b Fire Type
- *8a State
- *8b Owner
- *8c Vegetative Type
- *8d Acres
- 9a Fire Name
- 9b Area Name
- 9c Latitude/Longitude
- 9f Ownership
- 9g Fiscal Year
- 9h Agency Fiscal Data

Item Description

- 10a Discovery: date/time
- 10c Controlled: acres
- 10d Declared Out: date
- 11a-d Site Data
- 11e NFDRS Station (if available)
- 11f MSGC (if 11e is completed)
- 11h BI (if 11e is completed)
- 13c Plot Objective
- 13d OMIT
- 13e Cost/Acre

All other items are optional.

*<u>8a-8d may be repeated up to 8 times if needed.</u> Only the first set is mandatory.

FIRE TYPE 5 (ACTION TYPE FALSE ALARMS)

Item Description

1 Status Code

Item Description

ACTION TYPE FALSE ALARM !!!

- 10a Discovery: data/time/type/acres
- 10b Initial Attack: type/amount

DO NOT PREPARE A REPORT FOR A NO

- 2-3d Header 4a-b Fire Type
- 8a State
- 8b Owner
- 9a Fire Name
- 9e Cost Code
- 9g Fiscal Year
- 9h Agency Fiscal Data

SPECIFIC INSTRUCTIONS

PART I - WILDFIRES

- 1. <u>REPORT STATUS CODE</u> (Automatic Fill)
- 2. <u>REPORTING AGENCY</u> This refers to the Government agency submitting the report. (Automatic fill)
- 3. a. <u>UNIT</u> Enter first two digits of organization code (Automatic fill).
 - b. <u>SUB-UNIT</u> Enter last three digits of organization code (Automatic fill).
 - c. <u>CALENDAR YEAR</u> (Automatic fill)
 - d. <u>FIRE NUMBER</u> Fire number will automatically be assigned by the computer upon data entry. The entire report does not need to be entered into the computer to receive a fire number. The header (items 1 3c) is all that is required. The remainder of the report will need to be completed during and at the conclusion of the fire.
- 4. <u>FIRE TYPE</u>
 - a. **Fire Type** enter one of the following codes:
 - (1) <u>For all Fires Suppressed</u> Action taken by the reporting agency's employees, regardless of land ownership, or by contractors, or operators on reporting agency's land.
 - (2) <u>Natural Outs</u> Fires discovered after they have been extinguished by natural causes. **NO SUPPRESSION ACTION TOOK PLACE.**
 - (3) <u>Support Actions</u> Action taken at the request of a cooperator on a fire which is not threatening FWS land and no formal agreement exists which would require a FWS response. **Does not include initial attack under established mutual aid agreements.** (Protection Type 7).
 - (4) <u>Prescribed Fires</u> If the fire escaped and is declared a wildfire, the narrative for the prescribed fire should indicate such and reference the new assigned number for the wildfire. A new DI-1202 will be started for the newly declared wildfire. The cause and narrative should indicate that the wildfire resulted from an escaped prescribed fire.
 - (5) <u>False Alarms</u> For all reported fires on which some type of response was initiated (e.g., patrol plane or crew dispatched, etc.) but **no suppression action took place**, either because the fire was not found or it was not within reporting agency's jurisdiction.

- b. <u>PROTECTION TYPE</u> enter one of the following codes:
 - (1) For reporting agency land under reporting agency protection.
 - (2) For reporting agency land protected by another Federal agency under a Memorandum of Understanding or cooperative agreements.
 - (3) For reporting agency land protected by another non-Federal agency under a cooperative agreement or contract.
 - (4) This is NOT a valid code for FWS.
 - (5) For Other lands not under a Memorandum of Understanding, cooperative agreement or contract but where action is taken by the reporting agency to prevent fire spread to reporting agency lands.
 - (6) For Other lands protected by the reporting agency under a Memorandum of Understanding, cooperative agreement or contract.
 - (7) Support actions by the reporting agency under Fire Type 3.
 - (8) Prescribed Fire Planned Ignition.
 - (9) Prescribed Fire Unplanned Ignition.

General Cause	Code	Valid	Combinations
Natural	1	101, 1	
Camp Fire		208	
Smoking		310, 3	330
 Fire Use 			412, 413, 414, 415, 416, 417
Incendiary			519, 522
Equipment			604, 607, 623, 625
Railroads		704, 7	
Juveniles		•	326, 827
Miscellaneous		,	924, 926, 930
	9	302, 3	524, 520, 550
Specific Cause (2nd and 3rd d	ligit of Cause	colum	n)
Lightning	-		
Aircraft		02	
Burning Vehicle			
• Exhaust			
Exhaust - Other		05	Equipment/Exhaust
Logging Line			Equipment/Other
Brakes			
 Cooking / Warming Fire. 			
Warming Fire			combined with cooking
Smoking			6
Trash Burning			
Burning Dump			
Field Burning			
Land Clearing			
Slash Burning			
Right-of-way Burning			
*Resource Management			
Grudge Fire			
Pyromania			
Smoking Out Bees or G			Fire Use/Resource Mgmt Burning
Insect or Snake Control			Fire Use/Resource Mgmt Burning
Job Hunting		22	0 0
Blasting		23	
Burning Building			
Power Line			
Fireworks		26	
Playing with Matches		27	
Repelling Predators			Fire Use/Resource Mgmt Burning
House or Stove Flue Sp			Miscellaneous/Burning Building
Other (Unknown)			5 5
Volcanic			
Other (Known)			(valid with all causes except
× /			smoking - 3)
* Use cause 417 for an a	escaned nres	cribed	

* Use cause 417 for an escaped prescribed fire.

6. <u>CLASS OF PEOPLE</u> - Enter the most likely class code for the individuals involved in the ignition of the incident from the following:

Code Description

0...... For all fires where cause is lightning or unknown.

- 1...... For all individuals who own land or businesses within protection boundaries.
- 2...... For all individuals, their agents or employees, who have special use permits on reporting agency lands within protection boundaries.
- 3...... For contractors, their agents or employees for purchase of products or construction of facilities.
- 4...... For all Federal, State, County, Municipal or other public employees.
- 5...... For all permanent residents living inside or within one mile outside the protection boundary.
- 6...... For all seasonal residents or workers residing inside or within one mile outside the protection boundary.
- 7...... For all tourists, motorists, campers, etc., in transit through the protected area.
- 7. <u>NET RESOURCE VALUE CHANGE PER ACRE</u> OMIT
- 8. <u>STATISTICAL DATA</u>
 - a. <u>STATE</u> Enter the 2-letter State designator.
 - b. <u>OWNERSHIP</u> Enter from the following: One entry must be FWS (4).

Ownership	Code
BLM	1
BIA	2
NPS	3
FWS	4
USFS	5
Other Federal Lands	6
State	7
Private	8
Other	9
Foreign	0

c. <u>VEGETATIVE TYPE</u>

Type Commercial Forest Land (Land producing or capable of producing wood products such as sawtimber, posts, poles, etc., an not withdrawn from timber use.)	Code 1 d
Noncommercial Forest Land (Land not capable of yielding wood products or products or commercial forest land withdrawn from timber use.)	2 1

d. ACRES - Nearest tenth acre.

NOTE: Repeat Items 8a. thru 8d. for each change in State, Ownership or Vegetative Type. Items 8a. thru 8d. may be repeated up to 8 times if needed.

9. AGENCY DATA

- a. FIRE NAME Name is limited to 10 characters.
- b. <u>AREA NAME</u> Enter 2-digit Congressional District (CD) Code.
- c. <u>LATITUDE/LONGITUDE</u> Point of Origin. Enter latitude and longitude to the nearest minute for the point of origin. Can enter seconds.
- d. <u>LEGAL DESCRIPTION</u> May be used in addition to Latitude/Longitude. Enter Township, Range, Section and Meridian code. <u>DO NOT USE DECIMALS OR</u> <u>FRACTIONS</u>.
- e. <u>COST CODE</u> Enter from the following **Estimated Suppression**.

Cost Dollars C	Code
0-100	1
101-500	2
501-1,500	3
1,501-5,000	4
5,001-25,000	5
25,001-50,000	6
50,001-100,00	7
100,001-500,000	8
500,001 & over	. 9

- f. <u>OWNERSHIP</u> Point of Origin (This value must also be entered in 8b).
- g. FISCAL YEAR 4-digit automatic fill.
- h. <u>AGENCY FISCAL DATA</u> Enter best estimate of actual costs charged to fire number, including False Alarms (nearest dollar).
- i. <u>UNIVERSAL TRANSVERSE MERCATOR UTM</u> May be used *in addition* to Latitude/Longitude.
- j. FIRE PROBLEM CLASS Omit

10. SUPPRESSION DATA

a. <u>DATE DISCOVERED</u> - MMDDYYYY - Enter 8-digit number for month, day, and year. (Example: October 12 = 10121997.) Enter the leading 0 (zero) if the month or day is less than 10.

<u>TIME DISCOVERED</u> - HHMM - Enter 4-digit number using 24-hour clock. (Example: 8:13 p.m. = 2013).

<u>DETECTION</u> - Enter code for detection type from following:

Agency Lookout	ode A
Other Lookout	В
Fire Patrolman	С
Other Agency Employee	D
Cooperator Employee	Е
Agency Patrol Aircraft	F
Cooperator Patrol Aircraft	G
Other Aircraft	Н
Permittee	I
(All persons holding a use permit or contract on agency lands.) Visitor	.J
Local Resident	ĸ
(Permanent Residents on or adjacent to agency lands.)	
Other	
Smokejumper Patrol Flight	IVI
AFS Aircraft Not on Patrol	N

ACRES AT DISCOVERY - Enter to nearest tenth acre.

b. <u>DATE OF INITIAL ATTACK</u> - MMDDYYYY - Enter 8-digit number for month, day, and year. Enter the leading 0 (zero) if the month or day is less than 10.

<u>TIME OF INITIAL ATTACK</u> (defined as the time the first initial attack unit arrives at the incident) - HHMM - Enter 8-digit number using 24-hour clock.

<u>TYPE OF INITIAL ATTACK</u> - Enter code from the following list for first, second, and third units attacking fire.

Type Code
Explosives (# of Crews) A
Plows or Trenchers B
Light Engines (Less than 300 gal) C
Medium Engines (300-500 gal/50 GPM) D
Heavy Engines (500 gal+/70 GPM)
Handcrew (# of Individuals) F
Smokejumper (# of Individuals) G
Helitack Crew (# of Individuals) H
Light Airtanker (800-1000 gal-Type 3) I
Medium Airtanker (1000-2000 gal-Type 2) J
Heavy Airtanker (2000 gal+-Type 1) K
Light Helitanker (up to 300 gal-Type 3 & 4) L
Medium Helitanker (300-700 gal-Type 2) M
Heavy Helitanker (700 gal+-Type 1)N
Light Dozer (D-4 or Equiv.) O
Medium Dozer (D-5, D-6 or Equiv.) P
Heavy Dozer (D-7 and Larger or Equiv.) Q
OtherR
Monitoring Fire by Air (Not for natural out) S
Monitoring Fire by Ground (Not for natural out) T
Reconnaissance Aircraft U

<u>AMOUNT OF INITIAL ATTACK</u> - Enter the number of persons or pieces of equipment. When type of initial attack is Airplane Tanker (I-K) or Helicopter Tanker (L-N) or Helicopter Tanker (L-N), amount is number of drops. Code actual amount up to 99 items. For more than 99 items code zero (0). Enter number of flights for monitoring by air. Enter number of persons x number of days for ground monitoring (5 people x 3 days = 15).

<u>ACRES AT INITIAL ATTACK</u> (defined as size of fire at time initial attack unit arrives at the incident) - Enter to the nearest tenth acre.

c. <u>DATE CONTROLLED</u> - MMDDYYYY- Enter 8-digit number for month, day, and year. Enter the leading 0 (zero) if the month or day is less than 10.

<u>TIME CONTROLLED</u> - HHMM - Enter 4-digit number using 24-hour clock.

<u>ACRES AT CONTROL</u> - Enter total acres within control lines to nearest tenth acre.

d. <u>DECLARED OUT</u> - MMDDYYYY- Enter 8-digit number for month, day, and year. Enter the leading 0 (zero) if the month or day is less than 10.

11. <u>SITE DATA</u>

a. <u>TOPOGRAPHY</u> - Enter topography in vicinity of fire origin from the following:

Topographic Feature	Code
Ridgetop	1
Saddle	2
Upper 1/3 of slope	3
Middle 1/3 of slope	4
Lower 1/3	5
Canyon bottom	6
Valley bottom	7
Mesa or plateau	8
Flat or rolling	9

b. <u>ASPECT</u> - Enter appropriate code for the vicinity of the fire origin.

Aspect	Code
Flat	0
N	1
NE	2
E	3
SE	4
S	5
SW	6
W	7
NW	8
Ridgetop	9

c. <u>SLOPE</u> - Enter appropriate code for the vicinity of the fire origin.

Percent	Code
0-25	1
26-40	2
41-55	3
56-75	4
75+	5

d. <u>ELEVATION</u> - Enter appropriate code for the vicinity of the fire origin.

Elevation (ft)	Code
0-500	0
501-1500	1
1501-2500	2
2501-3500	3
3501-4500	4
4501-5500	5
5501-6500	6
6501-7500	7
7501-8500	8
8500+	9

- e. <u>NFDRS STATION</u> 6-digit NFDRS Station Number for the station describing the fire climate area in which the fire occurred, if available. Otherwise, leave blank.
- f. <u>FUEL MODEL</u> (MSGC) (Required if "e" is completed.) 4-character (Model/Slope/Grass Type/Climate Class) NFDRS fuel model designator characterizing vicinity of origin.
- g. <u>BEHAVIOR</u> Fire behavior characterizing vicinity of origin. (See Appendix 1 for narrative of the values.)

Fire Behavior	Code
Smoldering	1
Creeping/Spreading	2
Running	3
Running and Spotting	4
Torching	5
Crowning	
Erratic Behavior	8

- h. <u>BURNING INDEX</u> (Required if "e" is completed.) NFDRS BI for the station (if any) used to determine manning for initial attack on date of fire. Otherwise, leave blank.
- i. ADJECTIVE CLASS Reserved for Alaska use

12. <u>PREVENTION DATA</u> (Optional)

k. <u>DAY OF WEEK</u>

Day of Week	Code
Sunday	1
Monday	2
Tuesday	3
Wednesday	4
Thursday	5
Friday	6
Saturday	

♦ I. <u>WAS FIRE INVESTIGATED</u> (Y/N):

Value Co	ode
Yes	Y
No	Ν

m. <u>FIRE CAUSE SUSPECT</u>: Known or Unknown (K/U):

Value C	Code
Known	. Κ
Unknown	. U

• n. <u>SUSPECT</u>: Resident, Transient, or Unknown (R/T/U):

Value

Code

Resident	R
Transient	Т
Unknown	U

13. FUELS / EMISSIONS DATA

c. <u>PLOT OBJECTIVE</u> - Enter the code from the following table that best describes the primary burn objective.

Cultural Scene Maintenance Historical Scene Maintenance Other Cultural Site Maintenance	
Natural Systems Exotic or Undesirable Species Contro Habitat Maintenance Research	11
Hazard Reduction Fuel Reduction - Activity Fuels Fuel Reduction - Natural Fuels Real Property Protection Boundary Protection Fuel Break Maintenance	21 22 23
Maintenance Debris Removal Vista Removal Health (Insect Control) Right-of-Way Maintenance	31 32 33
Silvicultural Seed Bed Preparation Vegetative Type Manipulation Insect and Disease Control	41

d. <u>FIRING TYPE</u> (Planned Ignitions only) - Enter a 2-digit code from the following tables. The first digit describes the firing strategy and the second digit describes the application method.

1st position (strategy) Code

head fire1	
backing fire 2	
spot fire 3	
concentric fire 4	

2nd position (method) Code

hand ignition	1
aerial ignition	2
remote ignition	3

- e. <u>COST/ACRE</u> Enter the average cost per acre experienced on the burn (total cost divided by total acres).
- f. <u>FUEL MODEL</u> Enter the 2-digit FBPS Fire Behavior Models that best characterize the fuels in the burn area from the following codes. The first entry should represent the majority (at least 50 percent) of the fuels in the burn. The second entry should represent any lesser fuel type that occurs in the burn area. The first fuel model is required and the second fuel model is optional.

Fuel Model

Code

Herb and Herb-Dominated	
Short Grass (1 foot)	01
Timber (Grass and Understory)	02
Tall Grass (2.5 feet)	03
Chaparral and Shrub Fields	
Chaparral (6 feet)	. 04
Brush (2 feet)	05
Dormant Brush, Hardwood Slash	06
Southern Rough	07
Timber Litter	
Closed Timber Litter	08
Hardwood Litter	09
Timber (Litter and Understory)	. 10
Slash	
Light Logging Slash	11
Medium Logging Slash	12
Heavy Logging Slash	

- I. OMIT
- m. OMIT
- n. <u>FUEL LOADING FOR EMISSIONS</u> (see Table 1)
- o. OMIT

NARRATIVE (optional) - Enter information about the fire.

TITLE INFORMATION (mandatory)

Submitted By: Submitted Title: Submitted Date: Entered By: Entered Title: Entered Date:

MAP (optional) - Plot the perimeter of the fire on a hard copy.

APPENDIX 1

Narrative Descriptions of Fire Behavior

- 1. **Smoldering** A fire burning slowly through direct oxidation, in leaf mold, duff, peat, etc., in which there is little or no visible flame and little or no visible smoke, but some spread and definite heat output.
- 2. **Creeping/Spreading** A fire burning in fuel, such as leaf mold, litter, or light grass, with both visible flame and smoke.
- 3. **Running** A fire with significant output of heat such that direct attack might be impossible. Flame length could be expected to be in excess of 5 feet.
- 4. **Running and Spotting** Fire behavior similar to "Running", but burning embers and firebrands are aloft and new ignitions started.
- 5. **Torching** A fire in which the crowns or canopies of individual or groups of trees ignite; however, the fire does not continue into the canopy of surrounding vegetation.
- 6. **Crowning** The fire tends to move through the overstory or canopy, generally keeping pace with or perhaps even preceding the surface fire.
- 7. **Crowning and Spotting** The same as "Crowning", with firebrands carried aloft and starting fires some distance ahead.
- 8. **Erratic Behavior** Involves fire whirls, fire storms, blowup conditions, or other fire behavior in which the fire's rate and direction of spread is largely unpredictable.

MAX AND MIN FUEL LOADINGS BY SIZE CLASS FOR FBPS FUEL MODELS DI-1202 FIELD 13n

FBPS FUEL MODEL	Load Range	Shrub + Herb T/A	0-1" T/A	1.1"-3" T/A	3.1"-9" T/A	9"+ T/A	Litter + Duff Inches
1 SHORT GRASS (1 foot)	MIN	0.1	0	0	0	0	0
	MAX	2.0	1.5	0	0	0	4.0
2 TIMBER (Grass & Understory)	MIN	0.1	0	0	0	0	0
	MAX	1.5	2.0	2.5	2.3	7.8	4.0
3 TALL GRASS (2.5 feet)	MIN	0.1	0	0	0	0	0
	MAX	10.0	2.0	1.0	1.0	1.0	4.0
4 CHAPARRAL (6 feet)	MIN	1.1	0	0	0	0	0
	MAX	21.0	2.0	1.0	1.0	1.0	4.0
5 BRUSH (2 feet)	MIN	1.1	0	0	0	0	0
	MAX	11.0	2.0	1.0	1.0	1.0	4.0
6 DORMANT BRUSH -	MIN	1.1	0	0	0	0	0
HARDWOOD SLASH	MAX	11.0	2.0	1.0	1.0	1.0	4.0
7 SOUTHERN ROUGH	MIN	0.2	0.2	0	0	0	0
	MAX	1.5	4.0	2.0	2.0	2.0	4.0
8 CLOSED TIMBER + LITTER	MIN	0	0.1	0	0	0	0
	MAX	1.0	4.0	3.0	12.0	2.0	4.0
9 HARDWOOD LITTER	MIN	0	0.1	0	0	0	0
	MAX	2.0	3.5	.5	10.0	10.0	4.0
10 TIMBER (Litter + Understory)	MIN	0.5	2.0	0.1	1.0	1.0	0
	MAX	1.0	5.0	5.0	15.0	22.0	4.0
11 LIGHT LOGGING SLASH	MIN	0	2.0	1.0	1.0	1.0	0
	MAX	2.0	7.0	6.0	15.0	50.0	4.0
12 MEDIUM LOGGING SLASH	MIN	0	2.0	1.0	1.0	1.0	0
	MAX	3.0	18.0	16.0	20.0	100.0	4.0
13 HEAVY LOGGING SLASH	MIN	0	2.0	1.0	1.0	1.0	0
	MAX	3.0	29.0	28.0	40.0	200.0	4.0

REF: Aids to Determining Fuel Models for Estimating Fire Behavior

Intermountain Forest and Range Experiment Station GTR INT-122 NFES #1574