

NOTICE 1054 OF 2005

THE DEPARTMENT OF WATER AFFAIRS AND FORESTRY

THE NATIONAL FIRE DANGER RATING SYSTEM IN TERMS OF THE
NATIONAL VELD AND FOREST FIRE ACT, 1998(ACT NO 101 OF 1998)

I, **Tshepo Malatji**, in my capacity as Director: Forestry Regulation and acting in terms of section 9(1) of the National Veld and Forest Fire Act, read with the delegations of powers and duties made in terms of the National Veld and Forest Fire Act, hereby make and publish for general information the National Veld and Forest Fire Act, as set out in the Schedule hereto.



Tshepo Malatji
DIRECTOR : FORESTRY REGULATION

DATE: 17/06/05

Schedule

The National Fire Danger Rating System applies to the entire country and consists of the following components

1. The structure and formula

The structure and formula as contained in Appendix 1, is used to calculate the indicator values required to rate the fire danger rating in each region for an appropriate period or periods.

2. The fire danger rating

Appendix 2 shows the fire danger rating, which indicates, in a clear format, the fire prevention and preparedness measure to be taken for each rating.

3. The fire danger regions and threshold values

The entire country has been divided into separate regions, each region being one in which the fire danger is sufficiently uniform to allow for a single rating, which is meaningful for the entire region. Appendix 3 shows the **41** fire danger regions of the entire country.

The threshold *value* for each fire danger region is as set out in Appendix **4**.

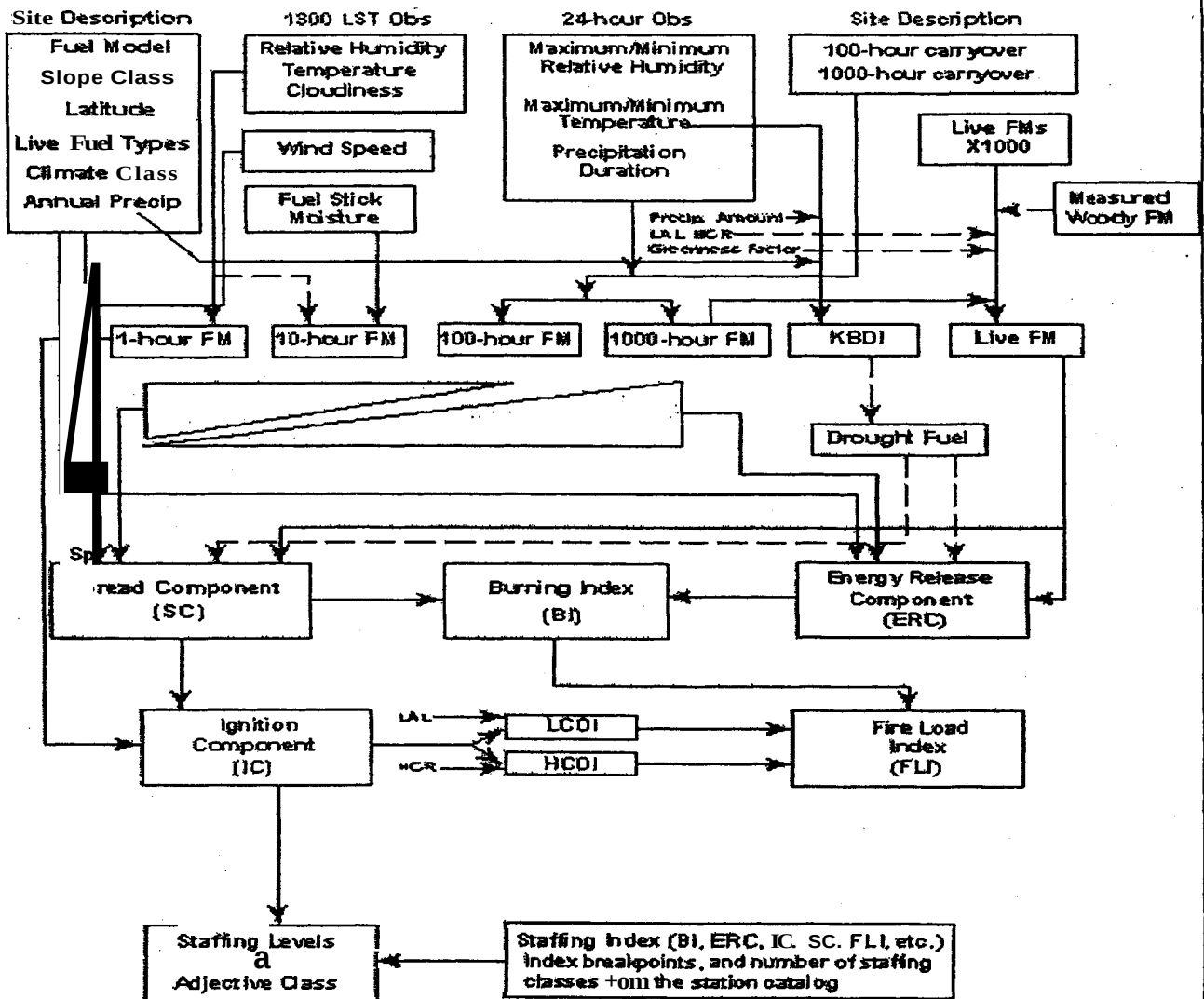
Appendix 5 is a list of municipalities for each fire danger region.

4. Communication

The Minister of Water Affairs and Forestry has delegated his duty to communicate the fire danger rating for each region to the South African Weather Services in terms of section **11** of the National Veld and Forest Fire Act, 1998 (Act No 101 of 1998).

APPENDIX I

U.S. NFDRS Structure



The shaded wedges show the contribution of dead fuel moisture to Spread Component (SC) and the Energy Release Component (ERC). Based on either the 1978 or the 1988 fuel model, the dashed lines show optional paths through the NFDRS system.

APPENDIX 2

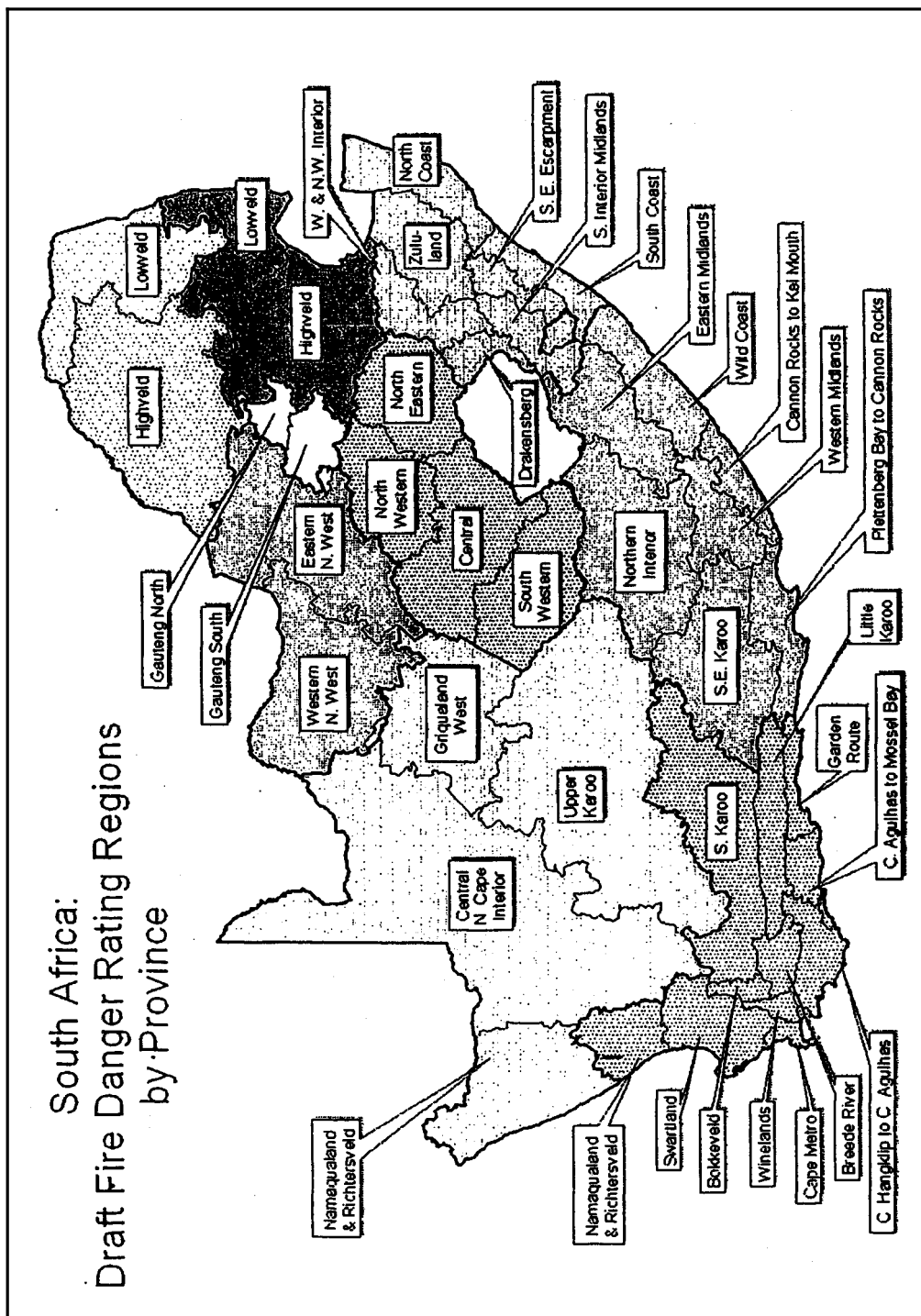
FIRE DANGER RATING

INDICATIVE COLOUR	FIRE DANGER RATING				DANGER RATING	FIRE PREVENTION AND PREPAREDNESS MEASURES	APPLICATION OF THE ACT	RELATIONSHIP WITH DISASTER MANAGEMENT
	BLUE	GREEN	YELLOW	ORANGE	RED			
	Insignificant	Low	Moderate	High	High - Extreme			
	No precaution is needed	Fires including prescribed burns may be lit, used or maintained in the open air on the condition that persons making fires take reasonable precautions against the fires' spreading.	No fires may be allowed in the open air except those that are authorised by the Fire Protection Officer where a Fire Protection Association exists, or elsewhere, the Chief Fire Officer of the local fire service, or fires in designated fireplaces.	No fires may be allowed under any circumstances in the open air.	No fires may be allowed under any circumstances in the open air and Fire Protection Associations and municipal Disaster Management Centres must invoke contingency fire emergency and disaster management plans including extraordinary readiness and response plans. All operations likely to ignite fires halted. Household holders placed on alert.			
			Above precautionary measure to be prescribed and made applicable nationally on days rated moderate.	Section 10(1)(b) applies: no person may light, use or maintain a fire in the open air.	Section 10(1)(b) applies: no person may light, use or maintain a fire in the open air.			
				The threat of disastrous wildfires exists at municipal level under these conditions. Municipal Disaster Management Centres must invoke contingency plans and inform National and Provincial Disaster Management Centres. (Section 49 of the Disaster Management Bill)	The threat of disastrous wildfires at provincial level exists under these conditions. Municipal Disaster Management Centres must invoke contingency plans and inform National and Provincial Disaster Management Centres. (Section 49 of the Disaster Management Bill).			

INDICATIVE COLOUR	YELLOW			ORANGE		RED
	BLUE	GREEN				
FIRE BEHAVIOUR	Fires are not likely to ignite. If they do, they are likely to go out without suppression action. There is little flaming combustion. Flame lengths in grassland and plantation forest litter lower than 0.5 m and rates of forward spread less than 0.15 kilometres per hour.	Fires likely to ignite readily but spread slowly. Flame lengths in grassland and plantation forest litter lower than 1.0 m and rates of forward spread less than 0.3 kilometres per hour.	Fires ignite readily and spread rapidly, burning in the surface layers below trees. Flame lengths in grasslands and plantation forests between 1 and 2m, and rates of forward spread between 0.3 and 1.5 kilometres per hour.	Fires ignited readily and spread very rapidly, with local crowning and short-range spotting. Flame lengths between 2 and 5 m, and rates of forward spread between 1.5 and 2.0 kilometres per hour.	Conflagrations are likely in plantation forests, stands of alien invasive trees and shrubs, sugar cane plantations, and fynbos. Long range fire spotting is likely in these fuel types. Rates of forward spread of head fires can exceed 4.0 kilometres per hour and flame lengths will be in the order of 5 – 15 m or more.	
FIRE SUPPRESSION DIFFICULTY	Direct attack feasible: one or a few field crew with basic fire fighting tools easily suppresses any fire that may occur.	Direct attack feasible: fires safely approached on foot. Suppression is readily achieved by direct manual attack methods.	Direct attack constrained: fires not safe to approach on foot for more than very short periods. Best forms of control should combine water tankers and back burning from fire control lines.	Direct attack not feasible: fires cannot be approached at all and back burning, combined with aerial support are the only effective means to combat fires. Equipment such as water tankers should concentrate efforts on the protection of houses.	Any form of fire control is likely to be precluded until the weather changes. Back burning dangerous and best avoided.	

APPENDIX 3

South Africa: Draft Fire Danger Rating Regions by Province



Appendix 4 Threshold values for the Burning Index of the National Fire Danger Rating System for the 42 fire danger regions

Province	Fire Danger Region	Allocated Fuel Model	Insignificant	Low	Moderate	High	High Extreme
Northern Cape	• Namaqualand & Richtersveld *	Model E	0 - 17	18 - 175	176 - 335	336 - 429	≥ 430
	• Central North Cape Interior *						
	• Griqualand West	Model C	0 - 17	18 - 31	32 - 39	40 - 42	≥ 43
	• Upper Karoo *	Model C	0 - 16	17 - 29	30 - 70	≥ 71	≥ 71
	• Kalahari	Model C	0 - 19	20 - 34	35 - 40	41 - 43	≥ 44
Western Cape	• Namaqualand & Richtersveld *	Model B	0 - 67	68 - 175	176 - 335	≥ 336	≥ 336
	• Swartland						
	• Bokkeveld						
	• Cape Metro						
	• Winelands						
Western Cape	• Cape Hangklip to Cape Agulhas	Model B	0 - 20	21 - 94	95 - 122	123 - 131	≥ 132
	• Breede River						
	• Cape Agulhas to Mossel Bay	Model B	0 - 18	19 - 40	41 - 70	71 - 102	≥ 103
	• Garden Route						
	• Little Karoo						
Western Cape	• Southern Karoo	Model B	0 - 52	53 - 158	169 - 210	211 - 224	≥ 225

* Fire danger regions having the same threshold values for high and high-extreme

Eastern Cape	• Plettenberg Bay to Cannon Rocks	Model B	0 - 18	19 - 40	41 - 70	71 - 102	≥ 103
	• Cannon Rocks to Kei River • Western Midlands • Northern Interior • Eastern Midlands • Wild Coast	Model C	0 - 3	4 - 21	22 - 29	30 - 32	≥ 33
	• South Eastern Karoo	Model B	0 - 52	53 - 168	169 - 211	211 - 224	≥ 225
KwaZulu / Natal	• South Coast • South Eastern Escarpment • Southern Interior Midlands • Drakensberg • West & North Western Interior	Model C	0 - 28	29 - 21	22 - 28	29 - 31	≥ 32
	• Zululand • North Coast	Model C	0 - 4	5 - 19	20 - 24	25 - 27	≥ 28
Mpumalanga	• Mpumalanga Highveld	Model C	0 - 5	6 - 18	19 - 22	23 - 25	≥ 26
	• Mpumalanga Lowveld	Model C	0 - 4	5 - 19	20 - 24	25 - 27	≥ 28
Limpopo	• Limpopo Highveld	Model C	0 - 5	6 - 18	19 - 22	23 - 25	≥ 26
	• Limpopo Lowveld	Model C	0 - 4	5 - 19	20 - 24	25 - 27	≥ 28
Gauteng	• Gauteng North • Gauteng South	Model C	0 - 5	6 - 18	19 - 22	23 - 25	≥ 26
North West	• Eastern North West • Western North West	Model C	0 - 13	14 - 29	30 - 37	38 - 40	≥ 41
	• North Eastern • North Western	Model C	0 - 5	6 - 18	19 - 22	23 - 25	≥ 26
Free State	• Central • South Western	Model C	0 - 17	18 - 31	32 - 39	40 - 42	≥ 43

APPENDIX 5

MUNICIPALITIES OF THE EASTERN CAPE, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Cannon Rocks to Kei River	ECI 05	Ndlambe	Port Alfred
	EC123	Great Kei	
	EC 125	Buffalo City	East London
	EC 126	Ngqushwa	
Eastern Midlands	EC05b2	Umzimvubu	
	EC135	Intsika Yethu	
	EC137	Engcobo	
	EC138	Sakhisizwe	Elliot
	EC141	Elundini	Maclear
	EC1 52	Ntabankulu	
	EC156	Mhlontlo	
	ECDMA44	ECDMA44	
Northern Interior	EC131	Inxuba Yethemba	Cradock
	EC132	Tsolwana	
	EC133	Inkwanca	Sterkstroom
	EC134	Lukhanji	Queenstown
	EC136	Emalahleni	Dordrecht
	EC142	Senqu	Barkly East
	EC143	Maletswai	Aliwal North
	EC144	Gariep	Burgersdorp
	ECDMA13	ECDMA13 (Mountain Zebra Nat. Park)	Cradock
	ECDMA 13	ECDMA13 (Tsolwana Game Park)	Tarkastad
	ECDMA14	ECDMA14	Gariep Dam
			—
Pletten berg Bay to Cannon Rocks	EC106	Sunday's River Valley	Kirkwood
	EC108	Kouga	Humansdorp
	ECI 09	Kou-Kamma	
	ECDMA10-2	ECDMA 10(Addo Elephant NP)	Addo
	ECDMA10-3	ECDMA 10 (Uitenhage rural)	
	ECDMA10-4	ECDMA10 (Tsitsikamma NP)	
	Port Elizab	Port Elizabeth	
South East Karoo	EC101	Camdeboo	Graaff

Fire danger region	Municipality code	Name of municipality	Major town
South Interior Midlands	EC 102	Blue Crane Route	Reinet Somerset East
	EC103	Ikwezi	
	EC107	Baviaans	Steytlerville
	ECDMA 10	ECDMA 10	Rietbron
Western Midlands	EC05b1	Umzimkulu	
Wild Coast	EC104	Makana	Grahamstown
	EC124	Amahlati	Stutterheim
	EC127	Nkonkobe	Fort Beaufort
	EC128	Nxuba	Adelaide
	EC121	Mbhashe	
	EC122	Mnquma	Butterworth
	EC151	Mbizana	
	EC153	Ingquza Hill	
	EC154	Port St Johns	
	ECI 55	Nyandeni	
	EC 157	King Sabata Dalindvebo	Umtata

THE MUNICIPALITIES OF THE FREE STATE, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Central Free State			
	FS171	Naledi	
	FS172	Mangaung	Bloemfontein
	FS173	Mantsopa	Ladybrand
	FS181	Masilonyana	Winburg
	FS182	Tokologo	Christiana
	FS183	Tswelopele	Bultfontein
	FS191	Setsoto	Senekal
North-Eastern Free State			
	FS192	Dihlabeng	Bethlehem
	FS193	Nketaona	Reitz
	FS194	Maluti a Phofung	Harrismith
	FS195	Phumelela	Warden
	FS205	Mafube	Frankfort
	FSDMA19	FSDMA19	
North-Western Free State			
	FS184	Matjhabeng	Welkom
	FS185	Nala	Bothaville
	FS201	Moghaka	Kroonstad
	FS203	Ngwathe	Parys
	FS204	Metsimaholo	
South-Western Free State			
	FS161	Letsemeng	Petrusburg
	FS162	Kopanong	Bethulie
	FS163	Mohokare	Zastron

MUNICIPALITIES OF GAUTENG, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Gauteng North	CBLC2	Kuriwini	
	GT02b1	Nokeng tsa Taemane	
	Pretoria	Pretoria (City of Tshwane)	Pretoria
Gauteng South	CBLC8	Merafong	Carltonville
	East Rand	East Rand (Ekurhuleni) Metropole	Nigel
	GT411	Mogale	Krugersdorp
	GT412	Randfontein	
	GT414	Westonaria	
	GT421	Emfuleni	Vereeniging
	GT422	Midvaal	
	GT423	Lesedi	Heidelberg
	GTDMA41	GTDMA41	
	Johannesburg	Johannesburg Metropole	Johannesburg

MUNICIPALITIES OF KWAZULU-NATAL, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Drakensberg	KZ235	Okhahlamba	
	KZ236	Imbabazana	
	KZDMA22	KZDMA22	
	KZDMA23	KZDMA23	
	KZDMA43	KZDMA43	
North Coast	KZDMA27	KZDMA27 (St Lucia)	
	KZ271	Umhlabuyalingana	
	KZ272	Jozini	Mkuze
	KZ273	Big Five False Bay (Umzinene)	
	KZ274	Hlabisa/Impala	
	KZ275	Mtubatuba/Inyara	
	KZ281	Mbonambi	Mtubatuba
	KZ282	uMhlathuze	
	KZ283	Ntambanana	
	KZ284	Umlalazi	Eshowe
South Coast	KZ291	Endondakusuka (Mandeni)	
	Durban	Durban (eThekweni) Metropole	Durban
	KZ211	Vulamehlo	
	KZ212	uMdoni	
	KZ213	Umzurnbe (Khiphinkunzi)	
	KZ214	uMuziwabantu	Harding
	KZ215	Ezingolweni	
	KZ216	Hibiscus Coast	Port Shepstone
	KZ226	Mkhambathini	
	KZ292	KwaDukuza	Stanger
	KZ293	Ndwedwe	
	KZ294	Maphumulo	
South East Escarpment	KZ221	uMshwathi	
	KZ225	Msunduzi	Pietermaritzburg
	KZ227	Richmond	
	KZ245	Umvoti	Greytown
	KZ5a5	Ubuhlebezwe	
South Interior Midlands	KZ222	Mngeni	
	KZ223	Mooi Mpofana	
	KZ224	Impendle	
	KZ5a1	Ingwe	
	KZ5a2	Kwa Sani	Underberg
	KZ5a3	Matatiele	Matatiele
	KZ5a4	Greater Kokstad	Kokstad

Fire danger region	Municipality code	Name of municipality	Major town
Western and North-Western Interior	KZ232	Emnambithi-Ladysmith	Ladysmith
	KZ233	Indaka	
	KZ234	Umtshezi	Estcourt
	KZ252	Newcastle	Newcastle
	KZ253	Utrecht	Volkstrust
	KZ254	Dannhauser	
	KZ261	eDumbe	
Zululand	KZDMA27	KZDMA27 (Hluhluwe/Umfolozi)	
	KZDMA27	KZDMA27 (Mkuzi)	
	KZ241	Endumeni	
	KZ242	Nquthu	
	KZ244	Msinga (Umsinga)	
	KZ262	uPhongolo	
	KZ263	Abaqulusi	Vryheid
	KZ265	Nongoma	Nongoma
	KZ266	Ulundi	Dundee
	KZ285	Mthonjaneni	
	KZ286	Nkandla	

MUNICIPALITIES OF LIMPOPO, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Limpopo Highveld			
	NP03A2	Makhudutamga (Fetakgomo)	
	NP03A3	Fetakgomo (NP03A2)	
	NP344	NP344	Loius Trichardt
	NP351	Blouberg	Alldays
	NP352	Aganang (Aganong)	
	NP353	Molemole	
	NP354	Polokwane	Polokwane
	NP355	Lepel(l)e - Nkumpi	
	NP361	Thabazimbi	Thabazimbi
	NP362	Lephalale	Ellisras
	NP364	Mookgopong	
	NP365	Modimolle	Nylstroom
	NP366	Bela Bela	Warmbad
	NP367	Mogalakwena	Mogalakwena
Limpopo Lowveld			
	NP04A1	Maruleng	Drakensburg
	NP331	Greater Giyani	
	NP332	Greater Letaba	
	NP333	Greater Tzaneen	Tzaneen
	NP334	Ba-Phalaborwa	Phalaborwa
	NP341	Musina	Musina
	NP342	Mutale	Thohoyandou
	NP343	NP343	

MUNICIPALITIES OF MPUMALANGA, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Mpumalanga Highveld	CBDMA3	CBDMA3	
	CBLC3	Greater Marble Hall (Makhudutama)	Marble Hall
	CBLC4	Greater Groblersdal (Marble Hall)	Groblersdal
	CBLC5	Greater Tubatse [CBLC5]	Ohrigstad
	MP301	Albert Luthuli	Carolina
	MP302	Msukaligwa	Ermelo
	MP303	Mkhondo	Piet Reief
	MP304	Seme	Wakkerstroorn
	MP305	Lekwa	Standerton
	MP306	Dipaleseng	Greylingstad
	MP307	Highveld East	Bethal, Secunda
	MP311	Delmas	
	MP312	Ernalahleni	Witbank
	MP313	Middelburg	Middelburg
	MP314	Highlands	Belfast
	MP315	Thembisile	
	MP316	Dr JS Moroka	
	MP321	Thaba Chweu	Lydenburg
	MPDMA31	MPDMA31	
	MPDMA32	Portion 1	
	MPDMA32	Portion 2	
Mpumalanga Lowveld	CBDMA4	CBDMA4 (Kruger National Park)	Skukuza
	CBLC6	Bushbuckridge (CBDMA4)	Acornhoek
	MP322	Mbombela	Nelspruit
	MP323	Umjindi	Barberton
	MP324	Nkomazi	Komatipoort
	MPDMA32	Portion 3	
	MPDMA32	Portion 4	
	MPDMA32	Portion 5	

MUNICIPALITIES OF NORTH WEST PROVINCE, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Eastern North West			
	GT02b1	Nokeng tsa Taemane	
	GTDMA41	GTDMA41	
	NW371	Moretele	
	NW372	Madibeng	Brits
	NW373	Rustenburg	Rustenburg
	NW374	Kgetleng	
	NW375	Moses Kotane	
	NW382	Tswaing (Greater Delareyville)	Delareyville
	NW384	Disotloba	Lichtenburg
	NW385	Zeerust	Zeerust
	NW393	Schweizer-Reneke	
	NW396	Lekwa-Teernane	Bloernhof
	NW401	Ventersdorp	Ventersdorp
	NW402	Potchefstroom	Potchefstroom
	NW403	City Council of Klerksdorp	Klerksdorp
	NW404	Maquassi Hills	Wolnaranstad
	NWDMA37	NWDMA37	
Western North West			
	NW1a1	Moshaweng (Segonyana)	
	NW381	Setla-Kgobi	
	NW383	Mafikeng	Mmbatho
	NW391	Kagisano	Morokweng
	NW392	Naledi	Vryburg
	NW394	Greater Taung	Taung
	NW395	Molopo	Vergelegen

MUNICIPALITIES OF THE NORTHERN CAPE, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Central North Cape Interior	NC065	Hantam	Calvinia
	NC067	Khai-Ma	Pofadder
	NC081	Mier	Noenieput
	NC082	!Kai! Garib (!Kei! Kariep)	Kakamas
	NC083	Khara Hais (Gariep)	Upington
	NC084	!Kheis (Ipoort)	
	NCDMA06	NCDMA06 (Northern portion)	
	NCDMA06	NCDMA06 (Southern portion)	
	NCDMA08	NCDMA08 (Kalahari Gemsbok N.P.)	
	NCDMA08	NCDMA08 (Middle portion)	
	NCDMA08	NCDMA08 (Southern portion)	
Griqualand West	CBLC1	Ga-Segonyana	Kuruman
	CBLC7	Phokwane	
	NC01B1	Gamagara (Gammagara)	Sishen
	NC078	Siyancuma	Douglas
	NC085	Tsantsabane (Re A Ipela)	Postmasburg
	NC086	Kgatelopele (Dan-Lime)	
	NC091	Sol Plaatjie (Kimberley)	Kimberley
	NC092	Dikgatlong (Thusanang)	
	NC093	Magareng (Warrenton)	Wmenton
	NCDMA09	NCDMA09	
	NCDMACB1	NCDMACB1	
Namaqualand and Richtersveld	NC061	Richtersveld	Port Nolloth
	NC062	Nama Khoi	Springbok
	NC064	Kamiesberg	Garies
Upper Karoo	NC066	Karoo Hoogland (Frasuwil)	Fraserburg
	NC071	Ubuntu (Sentrale Karoo)	Victoria West
	NC072	Umsobomvu (Towerberg)	Colesberg
	NC073	Enthanjeni (Garop)	De Aar
	NC074	Kareeberg	Carnarvon
	NC075	Renosterberg	
	NC076	Thembelihle (Oranje - Karoo)	Hopetown
	NC077	Siyathemba (Priemariday)	Prieska
	NCDMA07	NCDMA07 (Northern portion)	
	NCDMA07	NCDMA07 (Southern portion)	Prieska

MUNICIPALITIES OF THE WESTERN CAPE, IN EACH FIRE DANGER REGION

Fire danger region	Municipality code	Name of municipality	Major town
Bokkeveld	WC022	Witzenberg	Ceres
	WCDMA01	WCDMAOI (Cedarberg)	Citrusdal
Breede River	WC025	Breede Valley	Worcester
	WC026	Breede River/Winelands	Montagu
Cape Agulhas to Mossel Bay	WC042	Langeberg	Riversdale
	WCDMA03	WCDMA03 (De Hoop Nature Reserve)	Bredasdorp
Cape Hangklip to Cape Agulhas	WC031	Theewaterskloof	Caledon
	WC032	Overstrand	Hermanus
	WC033	Cape Agulhas	Bredasdorp
	WC034	Swellendam	Swellendam
Cape Metro	Cape Town	City of Cape Town	Cape Town
Garden Route	WC043	Mossel Bay	Mosselbaai
	WC044	George	George
	WC047	Plettenberg Bay	Plettenberg Bay
	WC048	Knysna	Knysna
Little Karoo	WC041	Kannaland	Ladismith
	WC045	Oudtshoorn	Oudtshoorn
	WCDMA04	WCDMA04	Uniondale
Namaqualand and Ritchersveld	WC011	Matzikama	Vanrhynsdorp
	WCDMA01	WCDMAOI (Bitterfontein)	Bitterfontein
Southern Karoo	WC051	Laingsburg	Laingsburg
	WC052	Prince Albert	Prince Albert
	WC053	Beaufort West	Beaufort West
	WCDMA02	WCDMA02 (Northern portion)	Touws River
	WCDMA05	WCDMA05 (Karoo National Park)	Beaufort West
	WCDMA05	WCDMA05	Murraysburg
Swartland	WC012	Cederberg	Citrusdal
	WC013	Bergrivier	Piketberg
	WC014	Saldanha Bay	Saldanha
	WCOI5	Swartland	Malmesbury
	WCDMAOI	WCDMAOI (West Coast)	Langebaan
Winelands			

Fire danger region	Municipal- ity code	Name of municipality.	Major town
	WC023	Drakenstein	Wellington
	WC024	Stellenbosch	Stellenbosch
