



ALABAMA STATE FIRE WEATHER ANNUAL OPERATING PLAN 2012

NATIONAL WEATHER SERVICE

ALABAMA FORESTRY COMMISSION

UNITED STATES FOREST SERVICE

NATIONAL PARK SERVICE

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I. INTRODUCTION

The forests of Alabama are a vital part of the state's economy. Primary responsibility for providing meteorological support to Land Management Agencies resides with the National Weather Service (NWS). There are four NWS offices which provide support to such agencies in Alabama: [Huntsville](#), [Birmingham](#), [Mobile](#), and [Tallahassee](#), Florida. Each NWS office employs a Fire Weather Program Leader who acts as a liaison between the NWS and user agencies within their area of responsibility. The Fire Weather Program Leader in Birmingham is responsible for maintaining the Alabama Fire Weather Operating Plan. The purpose of this operating plan is to provide guidance for meteorological support to land management agencies within the state of Alabama. The [Alabama Forestry Commission](#) (AFC), the [United States Forest Service](#) (USFS) and the [National Park Service](#) are the primary user agencies in Alabama.

This Operating Plan serves as the official document governing interaction and relationships between the National Weather Service offices that serve the federal, state and local land management agencies that rely on weather support in Alabama.

This Operating Plan is issued in lieu of a formal Memorandum of Understanding (MOU) between the National Weather Service, USDA Forest Service, Alabama Forestry Commission and other land management agencies that rely on fire weather support. The plan will also outline fire weather forecast operations and services available to customers. This includes products and formats, dissemination and coordination as well as customer input. The services will consist of fire weather products and support as outlined in the National Agreement for Meteorological Services, which was signed by the Departments of Commerce, Agriculture, and Interior.

Objectives of the forestry program are:

To provide weather forecasts and meteorological advice with enough detail to guide fire control personnel in making operational decisions concerning: fire suppression, fire prevention, prescribed burning, smoke management, wildfire suppression and other land management activities.

To keep abreast of the needs and problems of forestry interests as well as changing forecast and communication techniques, and to review this plan annually to assure the plans continued usefulness.

National Weather Service Headquarters

NWS Headquarters, located in Silver Spring, Maryland, establishes policies and coordinates the national fire weather program. The national program manager coordinates the program with the regional program managers. The national program manager also works with the national headquarters of the Federal forestry and land management agencies and the Association of State Foresters in determining overall forestry and land management requirements for meteorological support. The national program manager coordinates national training in forestry and fire weather for NWS forecasters.

National Weather Service Regional Headquarters

Regional Headquarters manage the technical operational aspects of the fire weather program within each region. They also provide guidance and assistance to meteorologists-in-charge (MIC) on program operations and problems through supplements to the National Directives System (NDS) and conferences. Regional Headquarters advise National Headquarters on matters pertaining to technical planning and operations. The regional program managers coordinate the regions' fire weather programs and advise Regional Directors on the operational and administrative aspects of the regions' programs.

National Weather Service Forecast Offices

National Weather Service offices are staffed 24 hours a day, 7 days a week and 365 days a year. This staffing fulfills the mission to provide timely and effective warnings, statements, and forecasts. **The phone numbers listed below are for user agencies only and not for public distribution.**

<p><u>NWS Birmingham</u> 465 Weathervane Road Calera, AL 35040</p> <p>205-664-3010 205-664-7821 (Fax)</p> <p>MIC: Jim Stefkovich Program Leader: Mark Linhares Mark.Linhares@noaa.gov</p>	<p><u>NWS Mobile</u> 8400 Airport Blvd Mobile, AL 36608</p> <p>251-633-6443 251-607-9773 (Fax)</p> <p>MIC: David McShane Program Leader: Don Faulkner Don.Faulkner@noaa.gov</p>
<p><u>NWS Huntsville</u> 320A Sparkman Dr. Huntsville, AL 35805</p> <p>256-890-8503 256-890-8512 (Fax)</p> <p>MIC: Mike Coyne Program Leader: Stephen Latimer Stephen.Latimer@noaa.gov</p>	<p><u>NWS Tallahassee</u> Florida State University 116 Palmetto Drive Tallahassee, FL 32306</p> <p>850-942-8833 850-942-8840 (Fax)</p> <p>MIC: Paul Duval Program Leader: Tim Barry Tim.Barry@noaa.gov</p>

II. FORECAST AREA

The state of Alabama is divided into 67 counties. Each county has its own unique zone number except Mobile and Baldwin counties, which are divided into inland and coastal zones. Alabama's forecast area is divided between four NWS offices (**Fig. 1**).

The Alabama Forestry Commission (AFC) has four main districts in Alabama (**Fig. 2**). Burn permits from the AFC are required for wood and field burns of more than 1/4 acre. The AFC has the authority to restrict or ban all outdoor burning. There are four national forests in Alabama (**Fig. 3**), comprising of over 660,000 acres. Both the AFC and U.S. Forest Service (USFS) are headquartered in the city of Montgomery. The normal fire danger season occurs from October through May, but ongoing site preparation and forest management continues throughout the entire year.

III. FIRE WEATHER FORECAST

Numerical data and weather maps showing atmospheric conditions such as pressure, temperature, moisture, wind, stability, and precipitation over the Northern Hemisphere are received continuously at the NWS. Doppler radars located throughout Alabama provide temporal and spatial information about precipitation and wind patterns within the atmosphere. Radio and land lines connect the NWS offices with Civil Defense, Emergency Management, Police, and Fire Agencies throughout the state. High resolution satellite imagery is received every 15 minutes or less showing cloud patterns across the state.

Forecasters use this information to prepare the Fire Weather Forecast (FWFBMX) (**Appendix B**) and other various fire related products. The format of the Fire Weather Forecast is tailored to meet the requirements of the AFC and USFS. Because the Mobile and Tallahassee NWS offices have forecast responsibility outside of Alabama, their fire weather forecasts include additional fire weather parameters. The requirements and parameters detailed below are those established with Alabama user agencies. The Fire Weather Groupings are tailored to represent the geographical boundaries of the US Forest Service and the Alabama Forestry Commission. These Groupings should not be combined, but may be increased to separate out those zones which are under watches or warnings. Fire Weather Forecasts for Alabama and across the entire United States can be found on the internet [here](#). Individual Fire Weather pages can be found here...[Birmingham](#), [Huntsville](#), [Mobile](#), & [Tallahassee](#).

A. ISSUANCE TIME

Fire weather forecasts are issued twice daily by the NWS. The morning forecast is issued no later than 600 am local time and includes three periods: Today, Tonight, and Tomorrow. The afternoon forecast is issued no later than 300 pm local time and includes four periods: Tonight, Day One, Tomorrow Night, Day Two. The Fire Weather Forecast should be updated when a Fire Weather Watch or Red Flag Warning is issued. The product should be corrected when a typographical error is detected.

B. CONTENT

HEADLINE

This section is required to highlight Red Flag Warnings and/or Fire Weather Watches in effect, which counties are involved, reason for issuance, and effective time period.

DISCUSSION

The discussion should be general weather pattern overview in a clear, brief and non-technical description. The emphasis should be on the first two days of the forecast and the parameters that most directly influence fire weather behavior.

CLOUD COVER

SKY COVER (%)	DAYTIME DESCRIPTOR	NIGHTTIME DESCRIPTOR
1-10	Sunny	Clear
11-20	Mostly Sunny	Mostly Clear
21-60	Partly Cloudy	Partly Cloudy
61-70	Partly Sunny	Partly Cloudy
71-90	Mostly Cloudy	Mostly Cloudy
91-100	Cloudy	Cloudy

PRECIP TYPE

Rain (RAIN) - liquid precipitation, not showery, and usually in a stable air mass.

Freezing Rain (FRZG RAIN) - liquid precipitation that freezes upon impact with solid objects or vegetation as opposed to ice forming on already wet surfaces.

Sleet (SLEET) - precipitation in the form of almost clear grains or ice pellets; often mixed with rain or freezing rain.

Snow (SNOW) - general or patchy flakes of crystalline precipitation.

Showers (SHOWERS) - medium to large water drops that usually vary in intensity; and may begin or end abruptly; no thunder heard.

Thunderstorms (TSTMS) - heavy or violent downpour of large water drops with gusty winds and possibly small hail.

CHANCE PRECIP (%)

Chance of precipitation pertains to the expected occurrence of 0.01 inch or more of water equivalent precipitation at any point in a forecast zone, and has no relationship to the amount of precipitation that is expected to occur. These will be 12-hour period forecasts.

TEMP

Temperature forecasts are single values in degrees Fahrenheit. The maximum/minimum temperatures are an average value over the entire forecast zone. Maximum temperatures are forecast for the daytime periods and the minimum temperatures are forecast for the nighttime period. The maximum temperature normally occurs during the afternoon. Because of terrain and types of ground cover, the high temperature can vary several degrees over a small area. The minimum temperature usually occurs around sunrise and can vary significantly between valleys and ridge tops, especially during inversions when the sky is clear and winds are light.

RH (%)

Relative humidity is the ratio, in percent, of the amount of moisture in the air compared to the amount of moisture the air could hold if saturated (100%). Therefore, temperature must be considered when using relative humidity as a measure of moisture in the air. The daytime humidity forecast will be the minimum expected during that 12-hour period. The nighttime humidity forecast will be the maximum expected. Usually, the minimum relative humidity occurs at the time of maximum temperature, and the maximum relative humidity occurs at the time of minimum temperature.

20FT WIND

For fire weather purposes, it is defined as a ten-minute averaged wind speed and direction at 20 feet above open ground, or twenty feet above the vegetation surface. The units are miles per hour (MPH). Six hour wind forecasts (AM/PM) are required. During the forecast process, a 20% reduction in the forecasted surface wind speeds is automatically calculated for the 20ft winds.

PRECIP AMOUNT

Precipitation amounts (inches) pertain to average liquid precipitation totals expected over the forecast zone. While general widespread precipitation tends to be more uniform over a forecast zone, shower activity will vary considerably. Ranges (0.10-0.20) are preferred for each of the 12-hour periods. The 12-hour amounts are for the periods 7am-7pm (Today), 7pm-7am (Tonight), and 7am-7pm (Tomorrow) when on Central Daylight Time (CDT). For Central Standard Time (CST), these time frames will move to 6am-6pm (Today), 6pm-6am (Tonight) and 6am-6pm (Tomorrow).

PRECIP DURATION

Duration of precipitation will be in hours (0-12) for each of the forecast periods. If showers are forecast, the aggregate time of all showers will be given.

MIXING HGT (FT-AGL)

The mixing height is defined as the vertical mixing of suspended particles above the ground. The mixing height is given in units of feet. Mixing height forecasts are for the maximum height expected during the afternoon, usually during the time of maximum heating. Mixing height forecasts for the nighttime period are optional.

TRANSPORT WIND

The transport wind is the average wind speed in the mixed layer, and is given in miles per hour. The transport wind is a good indication of horizontal dispersion of suspended particles. **A transport wind less than 7 mph restricts U.S. Forest Service from burning.**

DISPERSION INDEX

The dispersion index is computed from forecast variables that include 20 foot wind speed, mixing height, transport wind, and cloud cover. The index is used by fire managers as a guide for smoke management. Forest managers are cognizant of the need to occasionally restrict open burning to reduce atmospheric contaminants. When considered as a part of the whole pollution picture, prescribed burning is not one of the main contributing factors. It can become the dominant local factor, however, under certain atmospheric conditions. **A dispersion index of less than 21 limits the state and federal forestry services controlled burning program.** The following are guidelines for the Dispersion Index:

SCALE	INTERPRETATION
1-6	Very poor dispersion
7-12	Poor dispersion
13-20	Generally poor dispersion
21-40	Fair dispersion
41-60	Generally good dispersion
61-100	Good dispersion
100+	Very good dispersion

REMARKS

This section will include any specific information that the forecaster feels will aid the overall forecast. Examples would be information about wind shifts, wind gusts, heavy rainfall, and severe thunderstorms.

EXTENDED FORECAST

3 to 7 day forecast including Highs/Lows, chances for precipitation and surface winds.

IV. SPOT FORECAST

Spot Forecasts (FWSBMX) are weather forecasts that fit the time, topography and weather of a specific location. These forecasts are more detailed, timely and specific than the Fire Weather Forecast and are issued only when requested by Land Management Agencies or any Public Service Official. Refer to Appendix E to determine who can request a Spot Forecast. Federal Agencies are required to file a Spot Forecast with their paperwork when performing a prescribed burn.

For a small or contained burn, it may be easier to call the NWS and get a forecast over the telephone. For a larger or uncontrolled burn, the requesting agency should use **NWS Spot (Appendix A)** available on the Internet. Based on the county where the burn or fire is located, the requesting agency will need to access the Internet site of the appropriate NWS office (**Fig. 1**). If the Internet is not available or down, the user will need to fax a Spot Forecast Form (**Appendix A**) to the appropriate NWS office. To ensure that the spot request was received and possibly answer any questions the forecaster may have, the requesting agency should call the NWS office shortly after the request.

V. FIRE WEATHER WATCH/RED FLAG WARNING

A Red Flag Event occurs when ongoing or forecast critical weather conditions lead to or aggravate existing wildfires. **Red flag events require the combination of extreme fire danger and critical weather conditions.**

Extreme fire danger is a slowly evolving situation that comes about from prolonged periods of little or no rainfall. Critical weather conditions may include unusually warm temperatures, moderate surface winds, or significantly decreased humidity.

A **Fire Weather Watch** will be issued when the above mentioned conditions are expected to occur within the next 24 to 48 hours. A **Red Flag Warning** is issued when the above conditions are occurring or expected within 24 hours. In order to help the forecaster determine the onset of a Red Flag Event in Alabama, the following criteria must occur concurrently.

RED FLAG Event	
Cool Season Criteria Nov. 1 – Apr. 30	Warm Season Criteria May 1 – Oct. 31
RH < 25% for 4 or more consecutive hours; OR	RH ≤ 30% and 20 ft winds ≥ 10 mph for 4 or more consecutive hours AND
RH < 25% with sustained 20 ft winds of 20 mph or higher (no time restrictions)	KBDI ≥ 500**
Fire Danger Adjective	KBDI
<u>Low Fire Danger</u>	0-150
<u>Moderate Fire Danger</u>	140-300
<u>High Fire Danger</u>	300-500
<u>Very High Fire Danger</u>	500-700
<u>Extreme Fire Danger</u>	700-800

****If a particular county is under a Fire Alert, the Keetch-Byram Drought Index (KBDI) criterion is suspended.**

The KBDI criterion values may be found here...

http://www.srh.noaa.gov/bmx/kbdi/firewx_kbdi.php

or

<http://www.fs.fed.us/land/wfas/kbdi.png>

The KBDI is a soil moisture index based on daily high temperatures and rainfall. This index has also been found to be a good indicator of fuel moisture in the warm season, but can be unrepresentative in the cool season when dead fine fuels can ignite and burn rapidly during times of low relative humidity and moderate winds.

VI. FIRE ALERT

The Alabama Forestry Commission has the authority to restrict or completely ban outdoor burning. When fuel conditions reach critical levels, the AFC may issue a **Fire Alert** for all or portions of Alabama. If the conditions extend over a prolonged period, the alert could be elevated to a **Drought Emergency**. The AFC will fax a copy of the initial fire alert to each of the NWS offices that serve Alabama.

A map of the alert area can be found at <http://www.forestry.alabama.gov/>

The Fire Alert can be used to ascertain which counties may need to be included in a Fire Weather Watch or Red Flag Warning.

VII. NATIONAL FIRE DANGER RATING STATIONS (NFDRS)

The USFS operates remote automated weather stations (RAWS) in each of the National Forests which measure temperature, dew point, wind speed and direction, precipitation, and fuel moisture. The observational data is available on the Internet. NFDRS observations are posted on the Internet at <http://raws.wrh.noaa.gov/roman/>. At 1300 LST, NFDRS will send a coded weather observation. The NWS will use that observation to create a forecast valid at 1300 LST the following day. NFDRS software will use the NWS forecast to create a fire danger index for the following day. There are several NFDRS sites in Alabama where a forecast is created. The forecasts can be found at [Southwest Alabama](#), [Northern Alabama](#) and [Southeast Alabama](#). The Birmingham office will soon issue for sites in central Alabama

<u>Station Name (ID)</u>	<u>Forest</u>	<u>County</u>	<u>Latitude</u>	<u>Longitude</u>
Bankhead (010702)	Bankhead	Lawrence	34 08 24	87 21 44
Open Pond (015902)	Conecuh	Covington	31 05 40	86 32 55
Centreville (013201)	Oakmulgee	Bibb	32 57 26	87 10 14
Talladega (012701)	Talladega	Talladega	33 26 28	86 04 52
Tuskegee (014201)	Tuskegee	Macon	32 26 57	85 38 29
Shoal Creek (012902)	Talladega	Cleburne	33 38 50	85 38 04
Little River Canyon(010990)	NPS	Dekalb	34 29 52	85 37 45
Bon Secour	FWS	Baldwin	30 25 17	87 49 15

Example of FWM product decoded;

FCST,010702,061009,13,1,78,55,1,1,E,03,,78,51,100,38,0,0,N

010702 the forecast point ID

061009 year, month, and day (in this case, October 9, 2006)

13 the valid hour (always 1300 LST)

1 code for the weather, which is as follows:

0: clear

1: scattered clouds (1/8 to 4/8)

2: broken clouds (5/8 to 7/8)

3: overcast clouds (more than 7/8)

4: foggy

5: drizzle

6: raining

7: snowing or sleet

8: showers (in sight or at the station)

9: thunderstorm

78 Temperature at 1300 LST tomorrow

55 Relative humidity at 1300 LST tomorrow

1 LAL from 1400 to 2300 LST today

1 LAL from 2300 LST today to 2300 LST tomorrow

E 20-foot wind direction valid at 1300 LST

03 wind speed in mph valid at 1300 LST

(blank) 10-hour timelag fuel moisture (not included)

78 max temperature over the next 24 hours

51 min temperature over the next 24 hours

100 max RH over the next 24 hours

38 min RH over the next 24 hours

0 precip duration in hours between 1pm today and 5am LT tomorrow

0 precip duration in hours between 5am LST and 1pm LST tomorrow

N or Y indicates whether liquid water will be on the fuels at 1300 LST

tomorrow

Fire Weather Zone Map



Figure 1

Alabama Forestry Commission Districts

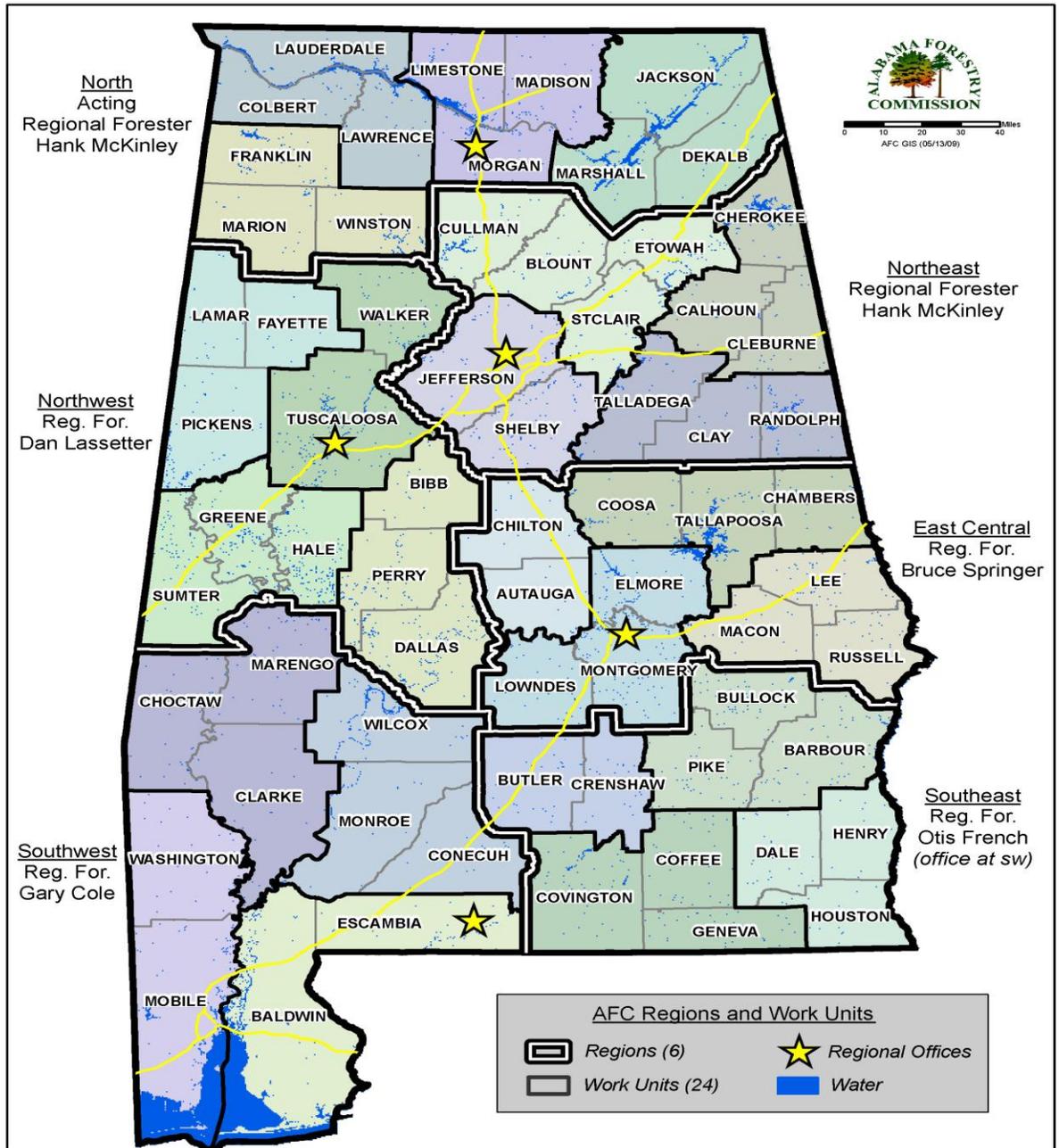


Figure 2
National Forests in Alabama

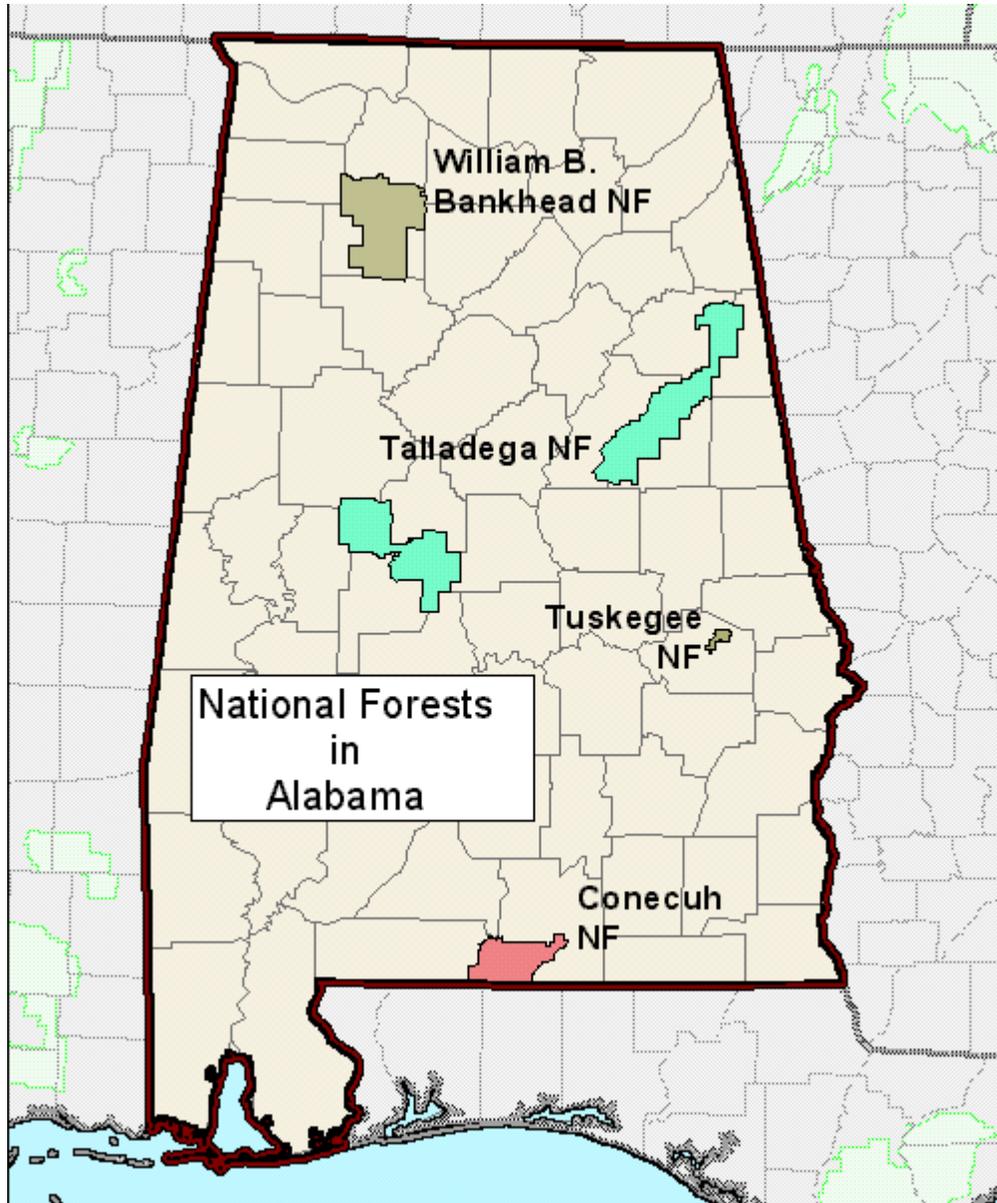


Figure 3

Appendix A

NWS Fire Weather Products

Fire Weather Forecasts

Birmingham	BHMFWFBMX	Forecast
Huntsville	HUNFWFHUN	Forecast
Mobile	BHMFWFMOB	Forecast
Tallahassee	MIAFWFTAE	Forecast

Fire Weather Watch/Red Flag Warning

Birmingham	BHMRFWBMX	Product
Huntsville	HUNRFWHUN	Product
Mobile	BHMRFWMOB	Product
Tallahassee	MIARFWTAE	Product

Smoke Management Forecast

Mobile	BHMSMFMOB	Smoke
Tallahassee	MIASMFTAE	Smoke

NWS Fire Weather Services

To request an official spot forecast:

Birmingham	http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=bmx
Huntsville	http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=hun

Mobile
Tallahassee

<http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=mob>
<http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=tae>

Appendix B

Product Examples

FIRE WEATHER PLANNING FORECAST FOR CENTRAL ALABAMA
NATIONAL WEATHER SERVICE BIRMINGHAM AL
300 PM CDT FRI APR 30 2004

DISCUSSION...SEVERAL UPPER LEVEL IMPULSES WILL PASS OVERHEAD DURING THE NEXT FEW DAYS AHEAD OF AN APPROACHING COLD FRONT. THIS IN COMBINATION WITH DAYTIME HEATING AND ABUNDANT GULF MOISTURE WILL KEEP SHOWERS AND THUNDERSTORMS IN THE FORECAST THROUGH SUNDAY.

ALZ011>015-022>025-010915-
FAYETTE-JEFFERSON-LAMAR-MARION-PICKENS-SHELBY-TUSCALOOSA-WALKER-
WINSTON-
INCLUDING THE CITIES OF...BIRMINGHAM-HOOVER...CARROLLTON...
COLUMBIANA-PELHAM-ALABASTER...DOUBLE SPRINGS...FAYETTE...HAMILTON...
JASPER...TUSCALOOSA...VERNON
300 PM CDT FRI APR 30 2004

	TONIGHT	SAT	SAT NIGHT	SUN
CLOUD COVER	MCLDY	MCLDY	CLOUDY	CLOUDY
PRECIP TYPE	TSTMS	TSTMS	TSTMS	TSTMS
CHANCE PRECIP (%)	50	80	90	60
TEMP	64	77	59	66
RH %	100	64	100	52
20FT WIND-AM(MPH)		S 5		NW 7
20FT WIND-PM(MPH)	LGT	W 8	W 6	N 8
PRECIP AMOUNT	0.09	0.33	0.60	0.19
PRECIP DURATION	2	2-4/PM	2	1-3/AM
MIXING HGT(AGL-FEET)		4800		3400
TRANSPORT WIND (MPH)		SW 18		NW 12
DISPERSION INDEX	N/A	58 GEN GOOD		35 FAIR
REMARKS...NONE.				

EXTENDED...

MONDAY...PARTLY CLOUDY. LOWS IN THE MID 40S. HIGHS IN THE LOWER 70S. NORTH WINDS 5 TO 10 MPH.

TUESDAY...PARTLY CLOUDY THEN BECOMING MOSTLY SUNNY. LOWS IN THE MID 40S. HIGHS IN THE MID 70S. NORTH WINDS AROUND 10 MPH.

WEDNESDAY...PARTLY CLOUDY THEN CLEARING. LOWS IN THE LOWER 50S. HIGHS IN THE UPPER 70S. SOUTHEAST WINDS AROUND 5 MPH.

THURSDAY...MOSTLY CLEAR THEN BECOMING PARTLY CLOUDY. LOWS IN THE MID 50S. HIGHS IN THE LOWER 80S. LIGHT WINDS BECOMING SOUTHWEST AROUND 5 MPH IN THE AFTERNOON.

FRIDAY...PARTLY CLOUDY. LOWS IN THE UPPER 50S. HIGHS IN THE LOWER 80S. LIGHT WINDS BECOMING SOUTH AROUND 5 MPH IN THE AFTERNOON.

FIRE WEATHER WATCH

NATIONAL WEATHER SERVICE BIRMINGHAM AL
230 PM CST TUE NOV 29 2002

...FIRE WEATHER WATCH FOR NORTHWEST ALABAMA WEDNESDAY AFTERNOON...

DISCUSSION...AN COLD FRONT WILL APPROACH NORTHWEST ALABAMA LATER TODAY. GUSTY WINDS WILL DEVELOP AFTER THE FRONTAL PASSAGE AND LOW RELATIVE HUMIDITIES WILL COMBINE TO PRODUCE RED FLAG CONDITIONS ON WEDNESDAY.

ALZ001>011-014-016-017-292300-
BLOUNT-COLBERT-CULLMAN-DEKALB-FRANKLIN-JACKSON-LAUDERDALE-LAWRENCE-
LIMESTONE-MADISON-MARION-MARSHALL-MORGAN-WINSTON-
730 AM CST THU NOV 30 2002

A PROLONGED DRY SPELL HAS PRODUCED HIGH FIRE DANGER CONDITIONS ACROSS NORTH ALABAMA. A COLD FRONT WILL MOVE INTO THE AREA TONIGHT AND BRING GUSTY NORTHWEST WINDS OF 15 TO 25 MPH ON WEDNESDAY. ALSO...RELATIVE HUMIDITIES WILL FALL TO NEAR 20 PERCENT WEDNESDAY AFTERNOON. THE WINDS SHOULD DIMINISH AFTER SUNSET.

A RED FLAG WARNING MAY BE ISSUED WEDNESDAY MORNING.

RED FLAG WARNING

NATIONAL WEATHER SERVICE BIRMINGHAM AL
700 AM CST WED NOV 30 2002

...RED FLAG WARNING TODAY FOR NORTHWEST ALABAMA...

DISCUSSION...GUSTY NORTHWEST WINDS TODAY AND LOW RELATIVE HUMIDITIES WILL PRODUCE RED FLAG CONDITIONS BY THIS AFTERNOON.

ALZ001>011-014-016-017-301800-
BLOUNT-COLBERT-CULLMAN-DEKALB-FRANKLIN-JACKSON-LAUDERDALE-LAWRENCE-
LIMESTONE-MADISON-MARION-MARSHALL-MORGAN-WINSTON-

700 AM CST WED NOV 30 2002

DRY NORTHWEST WINDS BEHIND A COLD FRONT WILL PRODUCE NORTHWEST WINDS OF 15 TO 25 MPH TODAY. IN ADDITION...RELATIVE HUMIDITIES WILL FALL TO NEAR 20 PERCENT THIS AFTERNOON...PRODUCING RED FLAG CONDITIONS. THE WINDS SHOULD DIMINISH AFTER SUNSET.

SPOT FORECAST FOR DEAD HORSE...USFS
NATIONAL WEATHER SERVICE BIRMINGHAM AL
701 AM CDT FRI OCT 15 2010

FORECAST IS BASED ON REQUEST TIME OF 0650 CDT ON OCTOBER 15.

IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NATIONAL WEATHER SERVICE.

...RED FLAG WARNING IN EFFECT FROM 11 AM THIS MORNING TO 7 PM CDT THIS EVENING...

.DISCUSSION...

BREEZY AND DRY CONDITIONS WILL CONTINUE TODAY. RELATIVE HUMIDITY LEVELS WILL DROP TO AROUND 25 PERCENT THIS AFTERNOON. 20 FOOT WINDS WILL BE AROUND 10 MPH WITH A FEW WIND GUSTS OF 15 TO 20 MPH POSSIBLE. THE RED FLAG WARNING REMAINS IN EFFECT FOR TODAY. LESSER WINDS ARE EXPECTED ON SATURDAY AND A RED FLAG IS NOT ANTICIPATED AT THIS TIME.

.TODAY...

SKY/WEATHER.....SUNNY (0-5 PERCENT).

MAX TEMPERATURE.....AROUND 67.

MIN HUMIDITY.....25 PERCENT.

WIND (20 FT).....LIGHT WINDS BECOMING NORTHWEST 5 TO 12 MPH IN THE LATE MORNING AND AFTERNOON.

CWR.....0 PERCENT.

LAL.....

MIXING HEIGHT.....0-1500 FT AGL INCREASING TO 4900-6800 FT AGL.

MIXING WINDS.....WEST 2 TO 7 MPH INCREASING TO NORTHWEST 23 TO 28 MPH.

DISPERSION INDEX....5 INCREASING TO 96 LATE IN THE MORNING...THEN INCREASING TO 114 EARLY IN THE AFTERNOON DECREASING TO 94 EARLY IN THE AFTERNOON INCREASING TO 121 DECREASING TO 99 LATE IN THE AFTERNOON.

TIME (CDT) 6 AM 8 AM 10 AM NOON 2 PM 4 PM
 SKY.....CLEAR CLEAR CLEAR CLEAR CLEAR CLEAR
 WEATHER COV.....
 WEATHER TYPE....NONE NONE NONE NONE NONE NONE
 TEMP.....39 47 60 62 65 67
 RH.....98 65 39 31 30 28
 20 FT WIND.....NW 1 W 1 W 5 W 9 W 12 NW 10
 CHC OF PCPN (%).0 0 0 0 0 0
 MIX HGT (FT)....BLW100 700 2500 5100 6700 6300
 TRANSPORT WIND..W 2 W 7 W 17 W 23 NW 26 NW 26
 DISPERSION.....1 3 8 96 91 121

.TONIGHT...

SKY/WEATHER.....CLEAR (0-5 PERCENT).
 MIN TEMPERATURE.....AROUND 47.
 MAX HUMIDITY.....72 PERCENT.
 WIND (20 FT).....NORTHWEST WINDS AROUND 5 MPH EARLY IN THE
 EVENING BECOMING LIGHT.
 CWR.....MISSING.
 LAL.....
 MIXING HEIGHT.....1500-3000 FT AGL DECREASING TO 100-900 FT AGL
 EARLY IN THE EVENING.
 MIXING WINDS.....NORTH 13 TO 20 MPH DECREASING TO 3 TO 10 MPH IN
 THE LATE EVENING AND OVERNIGHT.
 DISPERSION INDEX....74 DECREASING TO 5.

TIME (CDT) 6 PM 8 PM 10 PM MIDNGT 2 AM 4 AM
 SKY.....CLEAR CLEAR CLEAR CLEAR CLEAR CLEAR
 WEATHER COV.....
 WEATHER TYPE....NONE NONE NONE NONE NONE NONE
 TEMP.....66 61 56 54 53 51
 RH.....36 47 58 62 62 64
 20 FT WIND.....NW 5 NW 2 N 2 N 1 N 1 NE 1
 CHC OF PCPN (%).0 0 0 0 0 0
 MIX HGT (FT)....3000 900 800 400 200 200
 TRANSPORT WIND..NW 20 N 14 N 10 N 6 N 3 N 5
 DISPERSION.....74 17 11 3 2 2

.SATURDAY...

SKY/WEATHER.....SUNNY (0-5 PERCENT).
 MAX TEMPERATURE.....AROUND 68.
 MIN HUMIDITY.....27 PERCENT.
 WIND (20 FT).....LIGHT WINDS.
 CWR.....MISSING.
 LAL.....
 MIXING HEIGHT.....0-1800 FT AGL INCREASING TO 3100-4700 FT AGL.
 MIXING WINDS.....NORTHWEST 3 TO 6 MPH.
 DISPERSION INDEX....3 INCREASING TO 27.

TIME (CDT)	6 AM	8 AM	10 AM	NOON	2 PM	4 PM
SKY.....	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
WEATHER COV.....						
WEATHER TYPE.....	NONE	NONE	NONE	NONE	NONE	NONE
TEMP.....	48	51	58	61	64	67
RH.....	72	63	45	38	31	27
20 FT WIND.....	NE 2	NE 2	NE 2	N 3	N 3	N 3
CHC OF PCPN (%)..	0	0	0	0	0	0
MIX HGT (FT)....	BLW100	900	2700	3900	4600	4300
TRANSPORT WIND..	NE 3	NE 5	NE 6	N 5	N 5	NW 6
DISPERSION.....	2	2	3	21	25	29

Appendix C

Spot Forecast Request Guidelines

Spot forecasts will be issued on request to any governmental or private agency for a wildfire. Requests for spot forecasts for non-wildfire purposes will only be honored from federal agencies, from non-federal agencies operating with a federal agency on an interagency agreement or from any non-federal government agency when public safety is at risk.

For non-wildfire purposes, resources permitting, WFOs will provide spot forecast service under the following circumstances and conditions:

- A.** Upon request of any federal official who represents that the spot forecast is required under the terms of the Interagency Agreement for Meteorological Services.
- B.** Upon request of any state, tribal, or local official who represents that the spot forecast is required to carry out their wildland fire management responsibilities in coordination with any federal land management agency participating in the Interagency Agreement for Meteorological Services.
- C.** Upon request of any public safety official who represents the spot forecast is essential to public safety, e.g. due to the proximity of population centers or critical infrastructure. A “public safety official” is an employee or contract agent of a government agency at any level (federal, state, local, tribal, etc.) charged with protecting the public from hazards in including wildland fires of whatever origin and/or other hazards influenced by weather conditions such as hazardous material releases.

WFOs will not provide spot forecasts to private citizens or commercial entities not acting as an contract agent of a government agency at any level.

WS FORM D-1 U.S. Department of Commerce
 (1-2005) **SPOT REQUEST** NOAA
 (Supersedes Previous Editions) (See reverse for instructions) National Weather Service

**Please call the NWS Weather Forecast Office (WFO) when submitting a request and also after you receive a forecast to ensure request and forecast were received.
 Please provide feedback to WFO on forecast.**

1. Time†	2. Date	3. Name of Incident or Project	4. Requesting Agency
5. Requesting Official	6. Phone Number	7. Fax Number	8. Contact Person

9. Ignition/Incident Time and Date	12. Reason for Spot Request (choose one only) <input type="radio"/> Wildfire <input type="radio"/> Non-Wildfire Under the Interagency Agreement for Meteorological Services (USFS, BLM, NPS, USFWS, BIA) <input type="radio"/> Non-Wildfire State, tribal or local fire agency working in coordination with a federal participant in the Interagency Agreement for Meteorological Services <input type="radio"/> Non-Wildfire Essential to public safety, e.g. due to the proximity of population centers or critical infrastructure.	13. Latitude/Longitude:
10. Size (Acres)		14. Elevation (ft, Mean Sea Level) Top: Bottom:
11. Type of Incident <input type="radio"/> Wildfire <input type="radio"/> Prescribed Fire <input type="radio"/> Wildland Fire Use (WFU) <input type="radio"/> HAZMAT <input type="radio"/> Search And Rescue (SAR)		15. Drainage
		17. Sheltering <input type="radio"/> Full <input type="radio"/> Partial <input type="radio"/> Unsheltered

18. Fuel Type: Grass Brush Timber Slash Grass/Timber Understory Other _____
Fuel Model: 1,2,3 4,5,6,7 8,9,10 11,12,13 2,5,8

19. Location and name of nearest weather observing station (distance & direction from project):

20. Weather Observations from project or nearby station(s): (Winds should be in compass direction e.g. N, NW, etc.)

Place	Elevation	†Ob Time	20 ft. Wind Dir Speed	Eye Level Wind. Dir Speed	Temp. Dry Wet	Moisture RH DP	Remarks (Relevant Weather, etc)

<p>21. Requested Forecast Period Date _____ Start _____ End _____ Forecast needed for: <input type="radio"/> Today <input type="radio"/> Tonight <input type="radio"/> Day 2 <input type="radio"/> Extended</p>	<p>22. Primary Forecast Elements (Check all that are needed) (for management ignited wildland fires, provide prescription parameters): Needed: Sky/Weather ___ Temperature ___ Humidity ___ 20 ft Wind ___ Valley ___ Ridge Top ___ Other (Specify in #23) ___</p>	<p>23. Remarks (other needed forecast elements, forecast needed for specific time, etc.)</p>
<p>24. Send Forecast to: ATTN:</p>	<p>25. Location:</p>	<p>26. Phone Number: Fax Number:</p>
<p>27. Remarks (Special requests, incident details, Smoke Dispersion elements needed, etc.):</p>		
<p>EXPLANATION OF SYMBOLS: † Use 24-hour clock to indicate time. Example: 10:15 p.m. = 2215; 10:15 a.m. = 1015 Indicate local standard time or local daylight time</p>		