

WFO-Upton, NY

Fire Weather Annual Operating Plan

2006

1. Overview

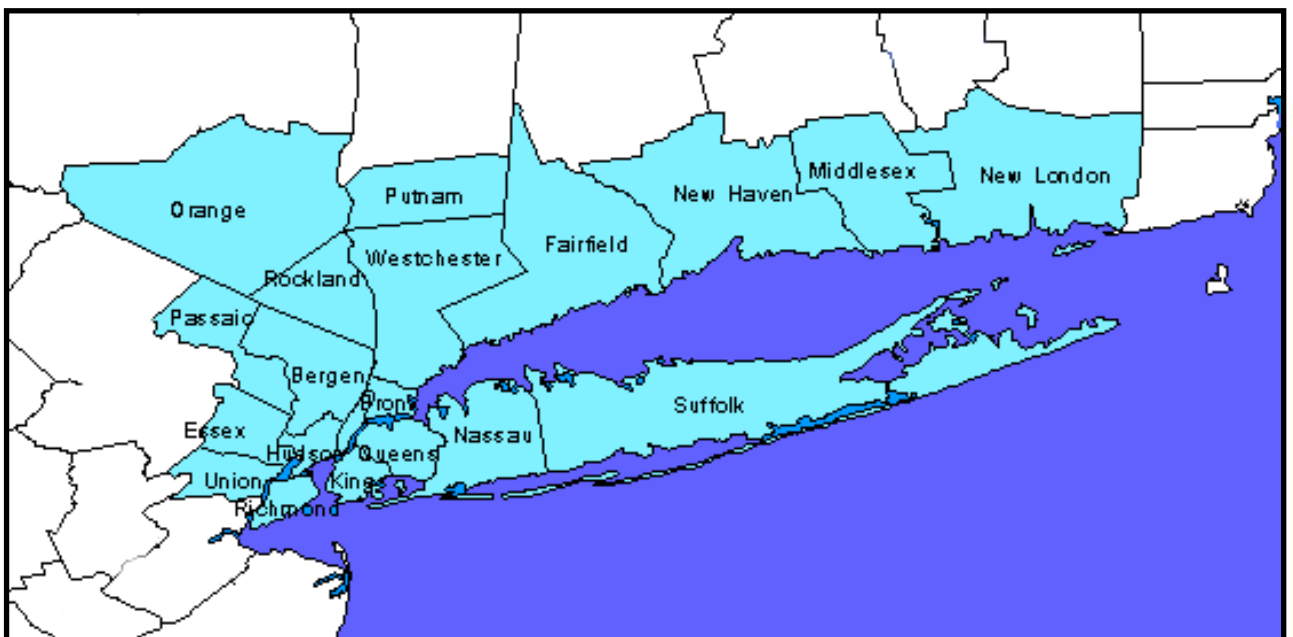
The NOAA National Weather Service Weather Forecast Office in Upton, NY (OKX) issues the following fire weather products:

- Fire Weather Planning Forecasts (FWF)
- Spot Forecasts (FWS)
- Fire Weather Watches (RFW)
- Red Flag Warnings (RFW)

Note: OKX does not issue a National Fire Danger Rating System (NFDRS) Forecast (FWM) at this time.

OKX generated experimental graphical forecasts of elements related to fire weather.

OKX services the 20 county area encompassing Southern Connecticut, Southeastern New York including New York City and Long Island, and Northeastern New Jersey.



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OKX also provides training and outreach to support customer requirements assuming these services or products remain within the bounds of the NWS mission and do not conflict with the national fire weather services program or product suite.

2. Communications

The NWS communication header for the OKX fire weather products are the follows:

FIRE WEATHER PLANNING FORECAST (FWF)

NYCFWFOKX
FNUS51 KOKX

SPOT FORECASTS (FWS)

NYCFWSOKX
FNUS71 KOKX

FIRE WEATHER WATCH/ RED FLAG WARNING (RFW)

NYCRFWOKX
WWUS81 KOKX

Access to the fire weather forecasts is available through the Internet at:

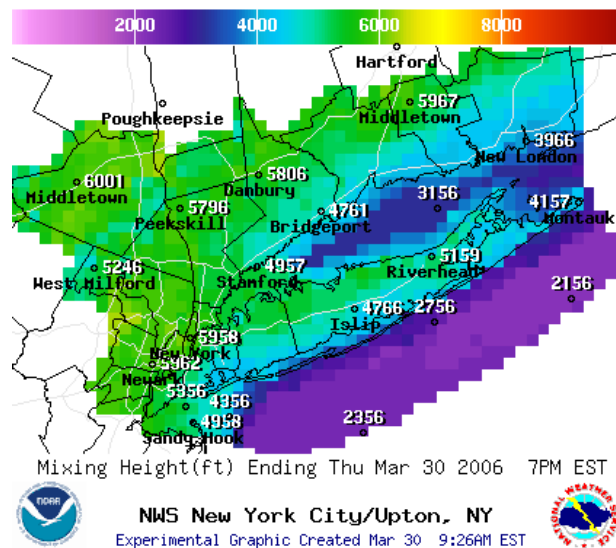
- weather.gov/nyc

Click the “**Fire Weather**” link under forecasts on the index frame on the left side of the web page. On this page, fire weather forecasts indices and additional local fire weather information can be found.

OKX generated experimental graphical forecasts of elements related to fire weather are available at:

<http://www.erh.noaa.gov/ndfd/graphical/sectors/okxFireDay.php>

Example of experimental graphical fire weather forecast elements; this shows a Mixing Height forecast.



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3. Fire Weather Planning Forecast - FWF

Mission Connection

The Fire Weather Planning Forecast is a zone-type product used by land management personnel primarily for input in decision-making related to pre-suppression and other planning. The decisions impact firefighter safety, protection of the public and property, and resource allocation.

Issuance Software

The FWF is generated using the Graphical Forecast Editor (GFE) with the Interactive Forecast Preparation System (IFPS).

Issuance Criteria

The FWF is a routine product and should be issued at least once daily (*year round*). During enhanced fire danger situation, the product may be issued twice daily at the request of the users and or OKX.

Issuance times will be between 400 AM and 600 AM LST. The FWF expires at the next routine issuance time, generally 24 hours later.

Format of a Fire Weather Forecast - (FWF)

EXAMPLE:

FNUS51 KOKX ddhhmm
FWFOKX

FIRE WEATHER PLANNING FORECAST FOR SOUTHEASTERN NEW YORK
NORTHEASTERN NEW JERSEY AND SOUTHERN CONNECTICUT
NATIONAL WEATHER SERVICE UPTON NY
334 AM EST MON MAR 27 2006

...HEADLINE... (ONLY REQUIRED for Red Flag Warnings and Fire Weather Watches)

.DISCUSSION... (Concise, clear, non-technical explanation of the current/forecasted fire weather)

CTZ005-NJZ002-NYZ067-ddhhmm-
NORTHERN FAIRFIELD CT-WESTERN PASSAIC NJ-ORANGE NY-
334 AM EST MON MAR 27 2006

...RED FLAG WARNING/FIRE WEATHER WATCH HEADLINE... (if needed)

	TODAY	TONIGHT	TUE
CLOUD COVER	MCLEAR	MCLEAR	PCLDY
PRECIP TYPE	NONE	NONE	NONE
CHANCE PRECIP (%)	0	0	0
TEMP (24H TREND)	54 (+2)	27 (-5)	52
RH % (24H TREND)	31 (-10)	88 (+17)	37
20FT WIND-AM (MPH)	NW 8		LGT/VAR
20FT WIND-PM (MPH)	NW 9	LGT/VAR	S 5
PRECIP AMOUNT	0.00	0.00	0.00
PRECIP DURATION			
PRECIP BEGIN			
PRECIP END			
MIXING HGT(FT-AGL/MSL)	4730		4460
TRANSPORT WND (MPH)	NW 17		SW 7
LAL	1	1	1
HAINES INDEX	4	5	4

REMARKS...NONE.

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.FORECAST FOR DAYS 3 THROUGH 7...

.WEDNESDAY...MOSTLY CLOUDY WITH CHANCE OF RAIN SHOWERS. LOWS IN THE MID 30S. HIGHS IN THE MID 50S. SOUTHEAST WINDS UP TO 5 MPH.

.THURSDAY...MOSTLY CLEAR. LOWS IN THE UPPER 30S. HIGHS IN THE UPPER 50S. WEST WINDS 5 TO 10 MPH.

.FRIDAY...PARTLY CLOUDY. LOWS AROUND 40. HIGHS IN THE UPPER 50S. SOUTH WINDS 10 TO 15 MPH.

.SATURDAY...PARTLY CLOUDY WITH CHANCE OF RAIN SHOWERS. LOWS IN THE LOWER 40S. HIGHS IN THE LOWER 60S. SOUTHWEST WINDS 10 TO 15 MPH.

.SUNDAY...PARTLY CLOUDY WITH CHANCE OF RAIN SHOWERS. LOWS IN THE UPPER 30S. HIGHS IN THE MID 50S. NORTHWEST WINDS 10 TO 15 MPH.

.OUTLOOK 8 TO 14 DAYS...

TEMPERATURES ABOVE NORMAL. PRECIPITATION BELOW NORMAL.

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Explanation of FWF Elements:

CLOUD AMOUNT:

Clear (CLEAR).... less than 1/10 opaque clouds
Mostly Clear....(MCLEAR)....1/10 to 3/10 opaque clouds
Partly cloudy (PCLDY).... 4/10 to 7/10 opaque clouds
Mostly cloudy (MCLDY).... 8/10 to 9/10 opaque clouds
Cloudy (CLOUDY).... more than 9/10 opaque clouds

PRECIP TYPE:

NONE
DRIZL (Drizzle)
FRZ RAIN (Freezing Rain)
SNOW/RAIN (Snow and or Rain)
RAIN
TSHWR

CHANCE PRECIP (%) - probability numbers in the forecast represent the expected occurrence of 0.01 inch or more of precipitation at any point in the fire weather zone during a forecast period to the nearest 10 percent.

TEMP (24H TREND) - temperature (F) - forecast for daytime maximum and nighttime minimum.

RH % (24H TREND) - relative humidity (percent) - forecast for daytime minimum and nighttime maximum.

20FT WIND-AM/PM (mph) - average direction **FROM** which the wind is blowing expressed using eight compass points AND average speed at 20 feet above the ground in exposed areas. Wind gusts are indicated if greater than ten miles an hour over the sustained speed.

PRECIP AMOUNT - estimated basin averaged amounts to nearest hundredth of an inch when precipitation chance is 20 percent or greater. If the precipitation is frozen a water equivalent will be given.

PRECIP DURATION - number of hours of expected precipitation when the chance of precipitation is 20 percent or higher.

PRECIP BEGIN - time the precipitation will begin. If it started earlier this will say "continuing"

PRECIP END - time the precipitation will end. If it will not end that time group it will say "continuing"

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HAINES INDEX - a stability index determined by combining the stability and moisture content of the lower atmosphere into a single number that correlates very well with large fire growth. Calculated near noon (18Z) for daytime and near midnight (06Z) for nighttime. Haines Index potential for large fire growth:
2 or 3 - very low, 4 - low, 5 - moderate, 6 - high.

LAL - lightning activity level for the period. Indicated by number of cloud to ground strikes during the indicated 12 hour period.

MIXING HEIGHT - height above the surface (feet) through which relatively vigorous mixing will take place due to convection during the day.

TRANSPORT DIR - average wind direction to 8 compass points from surface to top of mixed layer.

TRANSPORT SPEED - average wind speed in mph from surface to top of mixed layer.

REMARKS – (if needed) after the two day forecast and before the extended 3 to 5 day forecast.

3 TO 7 DAY EXTENDED FORECAST - a day by day prediction of general weather conditions expected to occur during the 3 days following the tomorrow forecast period.

8 TO 14 DAY OUTLOOK - a general description of the next seven days compared to 30 year temperature and precipitation normals (averages).

4. Spot Weather Forecast - FWS

Mission Connection

Spot Weather Forecasts are issued by OKX in support of wildfire suppression and natural resource management.

Issuance

FWS's are non-routine products and are issued at the request of federal, state, tribal, or local officials in support of wildfires and fire management responsibilities (i.e. prescribed burns). They are not issued for private citizens or commercial entities not acting as an agent of a government agency.

Requesting at Spot Weather Forecast

Officials must request spot forecast through the Internet.

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

(If the connectivity is unavailable, officials may contact OKX directly)

"NOTICE: Information provided on this form may be used by the NWS for official purposes in any way, including public release and publication in NWS products. False statements on this form may be subject to prosecution under the False Statement Accountability Act of 1996 (18 U.S.C. § 1001, as amended) or other statutes."

All spot forecasts will be available for public use, including identification of the requester.

Issuance Time

Spot forecasts are non-routine and may be issued at any time upon user's request.

Requests for Spots in support of fire management (planned) activities are desired as soon as possible, but are not fulfilled more than 24-30 hours (usually during the morning) before the activity is scheduled to begin. Requestors should consult the Fire Weather Planning Forecast (FWF) leading up to planned activities to determine if conditions may be appropriate for activities before requesting a Spot.

Spots issued in support of fire management (planned) activities are updated the morning of the activity between 4 and 6 LST. The Spot may also be updated by OKX if forecast conditions change significantly. Users should always consult the Internet for the latest Spot Forecast before making decisions.

Internet FWS Request Form:

UPTON NEW YORK SPOT FORECAST REQUEST
Required Elements in RED

<p>PROJECT NAME</p> <p>Project Name: <input type="text"/></p> <p> <input type="radio"/> Wildfire <input type="radio"/> WFU <input type="radio"/> HAZMAT <input checked="" type="radio"/> Prescribed Fire <input type="radio"/> SAR </p> <p>Ignition Time: <input type="text" value="1115"/> <input type="checkbox"/> Insect/Land Fire</p> <p>Date: <input type="text" value="3/30/06"/></p>	<p>REQUESTING AGENCY</p> <p>Requesting Agency: <input type="text" value="NWS"/></p> <p>Requesting Official: <input type="text" value="Testing"/></p> <p>Phone Number: <input type="text" value="(777) 123-1234"/> Ext. <input type="text"/></p> <p>FAX Number: <input type="text"/></p> <p>Contact Person: <input type="text"/></p>
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REASON FOR SPOT FORECAST REQUEST
Must choose either Wildfire or one of the Non-Wildfire reasons:

Wildfire

Non-Wildfire

- Under the Interagency Agreement for Meteorological Services (USFS, BLM, NPS, USFWS, BIA).
- State, tribal or local fire agency working in coordination with a federal participant in the Interagency Agreement for Meteorological Services.
- Essential to public safety, e.g. due to the proximity of population centers or critical infrastructure.

For FWS Spot forecast policy, see section 4.0 in FWS Instruction 10-401 at <http://www.weather.gov/directives/010/010.htm>

<p>LOCATION</p> <p>Lat: <input type="text"/> Elevation: <input type="text"/> Top <input type="text"/> Bottom</p> <p>Lon: <input type="text"/> Longitude: <input type="text"/></p> <p>7.5' Quad: <input type="text"/> Aspect: <input type="text"/></p> <p>Size: <input type="text"/> (Acres)</p>	<p>FOUN</p> <p>Type: <input type="text"/></p> <p><input type="radio"/> Sheltering</p> <p><input type="radio"/> Full</p> <p><input type="radio"/> Partial</p> <p><input type="radio"/> Unsheltered</p>
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Place	Elev	Time	Wind	Temp	Wetbulb	RH	Dewpt.	Sky/Weather
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<p>PRIMARY FORECAST ELEMENTS</p> <p>YDA INT YMR (Today, Tonight, Tomorrow)</p> <p> <input type="checkbox"/> Sky/Weather <input type="checkbox"/> Temperature <input type="checkbox"/> Relative Humidity <input type="checkbox"/> 20 Foot Wind <input type="checkbox"/> Chance of Wetting Rain <input type="checkbox"/> Smoke Dispersion </p>	<p>REMARKS</p> <div style="border: 1px solid black; height: 100px;"></div>
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NOTICE: Information provided on this form may be used by the National Weather Service (NWS) for official purposes in any way, including public release and publication in NWS products. False statements on this form may be subject to prosecution under the False Statement Accountability Act of 1994 (18 U.S.C. § 1001) or other statutes.

FWS Format

There are two (2) formats of the Spot forecast

- FWS for Wildfires
- FWS fire management (planned) activities

The FWS wildfire is standardized nationally. This standard ensures that fire suppression personnel brought in from another area of the country will be proficient in the interpretation of any spot forecast issued for wildfires.

This format is specified in NWS Instruction 10-401 dated March 15, 2006 at available at:

<http://www.weather.gov/directives/sym/pd01004001curr.pdf>

The format of FWS fire management (planned) activities is similar, but in tabular form to meet the detailed needs of the user.

Example of a FWS in support of a prescribed burn:

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SPOT FORECAST FOR BOG BROOK...NYS DEC
NATIONAL WEATHER SERVICE UPTON NY
223 PM EST WED MAR 22 2006

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

.DISCUSSION...

.TODAY...
TIME (EST)      2 PM   4 PM   6 PM   8 PM   10 PM  MIDNGT  2 AM
SKY.....MCLDY  MCLDY  MCLDY  PCLDY  MCLDY  MCLDY   MCLDY
WEATHER COV.....
WEATHER TYPE....NONE   NONE   NONE   NONE   NONE   NONE   SNSHWR
TEMP.....42    43    40    36    33    31    29
RH.....34    33    38    46    53    61    66
20 FT WIND.....NW 8   NW 7   NW 6   NW 5   NW 5   NW 4   NW 4
20 FT WIND GUST.20    20    15
CWR.....10    10    10    10    10    10    10
MIX HGT (FT)...4100  4100  4100  3400  3400  3400  2200
TRANSPORT WIND..NW 22  NW 22  NW 22  NW 23  NW 23  NW 23  NW 18

SKY/WEATHER.....PARTLY CLOUDY (55-65 PERCENT) THEN BECOMING
MOSTLY CLOUDY (70-80 PERCENT).
MAX TEMPERATURE.....AROUND 43.
MIN HUMIDITY.....30 PERCENT.
WIND (20 FT).....NORTHWEST WINDS 5 TO 10 MPH.
CHANCE OF PCPN.....10 PERCENT.
MIXING HEIGHT.....1600 FT AGL INCREASING TO 4100 FT AGL.
MIXING WINDS.....NORTHWEST 14 TO 22 MPH.

.THURSDAY...
SKY/WEATHER.....PARTLY CLOUDY (55-65 PERCENT). CHANCE OF

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Users of FWF's are strongly encouraged to provide feedback to the forecast staff via the Internet.

5. Fire Weather Watch/Red Flag Warning - RFW

Purpose

Forecasters will issue Fire Weather Watches/Red Flag Warnings when the combination of dry fuels and weather conditions support extreme fire danger in combination with local fire management officials.

Issuance Criteria for a WATCH

When forecasted fire weather conditions appear to be dangerous over the next 12 to 72 hours, a fire weather watch (**RFWOKX**) is issued (with coordination with the appropriate fire personnel).

- Less than 12 hours:

If forecaster certainty is **> 30% but < 70%** that red flag conditions could be reached within the next 12 hours, then issue a Fire Weather Watch. If there is a **≤ 30%** chance of red flag conditions, issue a headline in the **FWFOKX** stating "**NEAR RED FLAG POSSIBLE**".

- More than 12 hours:

If expected conditions fall within the red flag criteria, a "Fire Weather Watch" is usually issued between 400am-600am LST.

Issuance Criteria for a WARNING

When forecasted fire weather conditions appear to be dangerous during the next 24 hours and if forecaster certainty is **> 70%**, a Red Flag Warning (**RFWOKX**) is issued (with prior coordination with the appropriate fire personnel)

A warning implies that conditions are imminent or occurring.

ALL FACTORS LISTED BELOW EACH STAGE MUST BE MET

During Vegetation Stage I or II (Spring and Fall)

1. Winds sustained or frequently gusting above 25 mph.
2. Relative Humidity less than 30%.
3. Rainfall less than 1/4 of an inch during the previous 5 or more days.

During Vegetation Stage III (Summer)

1. Winds sustained or frequently gusting above 25 mph.
2. Relative Humidity less than 30%.
3. Rainfall less than 1/4 of an inch during the previous 8 or more days.
4. Fuels; Keetch Byram Drought Index (KBDI) above 300.

Format of a Fire Weather WATCH Message - (RFW)

**WWUS81 KOKX ddhmm
RFWOKX**

**FIRE WEATHER WATCH
NATIONAL WEATHER SERVICE UPTON NY
830 EDT TUE JUN 1 2004**

CTZ005>012-NJZ002>006-NYZ067>071-ddhmm-

...HEADLINE...

TEXT (Discussion that will focus on adverse weather conditions)

CALL TO ACTION (optional)

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Format of a Fire Weather WARNING Message - (RFW)

**WWUS81 KOKX ddhmm
RFWOKX**

**RED FLAG WARNING
NATIONAL WEATHER SERVICE UPTON NY
830 EDT TUE JUN 1 2004**

CTZ005>012-NJZ002>006-NYZ067>071-ddhmm-

...HEADLINE...

TEXT (Discussion that will focus on adverse weather conditions)

CALL TO ACTION (optional)

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