

FIRE WEATHER OPERATIONS PLAN FOR OHIO AND NW PENNSYLVANIA-2009

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1.0 INTRODUCTION

The National Weather Service (NWS) Offices in Cleveland; Wilmington, Ohio; Charleston, West Virginia; Pittsburgh Pennsylvania, and North Webster, Indiana will provide fire weather support for the State of Ohio.

The National Weather Service Offices in Cleveland, Mount Holly, New Jersey, Pittsburgh, State College and Binghamton, New York will provide fire weather support for the State of Pennsylvania.

Each weather office shall be responsible for the fire weather forecast in their county warning area (CWA).

A general Fire Weather Forecast for the States of Ohio and Pennsylvania will be issued year round by most offices. Some offices will issue the forecast twice a day from early March through December.

Also spot forecasts for wildfire support will be available throughout the year, 24 hours a day from each of the above mentioned weather offices. The NWS can provide formal spot forecasts for non-wildfire situations, such as prescribed burns and smoke management, for state and federal land areas and for any agency with a wildfire.

This Operations Plan will explain the type of information available for Fire Weather support and the sources of this information.

This plan will be reviewed annually by all parties. Proposed changes to this plan will be approved by all parties before such changes are implemented.

2.0 FORECAST AREAS

Ohio is divided among five NWS Offices for weather forecast and/or weather warning responsibility see Attachment A.

The state is divided as follows:

<u>Forecast Office</u>	<u>Area of Responsibility</u>
Cleveland	Much of Northern Ohio
Pittsburgh, PA	East Central Ohio
Charleston, WV	Southeast Ohio
Wilmington	West Central and Southwest Ohio
North Webster, IN	Extreme Northwest Ohio

Pennsylvania is divided among five NWS Offices for weather forecast and/or weather warning responsibility see Attachment B.

<u>Forecast Office</u>	<u>Area of Responsibility</u>
Cleveland, OH	Extreme Northwest Pennsylvania
Pittsburgh, PA	Much of Western Pennsylvania
State College, PA	Most of Central Pennsylvania
Mt. Holly, NJ	Most of Eastern Pennsylvania
Binghamton, NY	Extreme Northeast Pennsylvania

3.0 FIRE SEASON

The fire season is normally March through the first snows of December. This can vary because of the weather.

The NWS Cleveland fire weather forecast for its Ohio and Pennsylvania counties will be issued under CLEFWFCLE with a WMO header of FNUS51. Some offices, including NWS Cleveland issue the Fire Weather forecast year round.

4.0 ISSUANCE TIME OF NORMAL FORECASTS

The Northern Ohio and Northwest Pennsylvania Weather Forecast will be issued daily by 630 am local time year round.

5.0 FIRE WEATHER FORECAST

The fire weather forecast will cover specific conditions for a 36 hour period and consist of three 12-hour periods (today, tonight and tomorrow). An extended 3-7 day forecast will be included after each zone group. The 8 to 14 day forecast is presented as a comparison to normal conditions for that particular time period and uses data for Ohio. See attachment C for example of a Fire Weather Forecast.

The forecasts are generated using the GFE (Graphic Forecast Editor) software. In GFE, graphics are drawn for different weather parameters including: temperature, dew point, wind, etc. The software then generates a Fire Weather Forecast using the graphics that have been drawn. Counties are grouped together (based on expected weather conditions) to make up a zone in the public forecasts. The zones used in the Fire Weather Forecast are the same as used in the public forecasts. The counties included in a zone forecast may vary daily.

If the forecast cannot be generated because of software issues, BUF the primary backup office for CLE would be contacted to run the Fire Weather Forecast. If they can't generate a forecast, then the secondary office ILN would be notified.

The fire weather product issued will include the following information (see Attachment C):

- 1) **DISCUSSION** - brief description of general weather conditions affecting forecast for the next 36 hours.

The forecast is then broken down into 3 periods; today, tonight, and tomorrow, for the following parameters;
- 2) **CLOUD COVER** - clear, mostly clear (MCLEAR), partly cloudy (PCLDY), mostly cloudy (MCLDY), and cloudy.
- 3) **PRECIP TYPE** - none, drizzle, rain, showers, tstms, frzg rain, sleet, snow/rain.
- 4) **CHANCE PRECIP (%)** - the probability of precipitation in tens of percent for each 12 hour.
- 5) **TEMP (24 H TREND)** - daytime maximums and nighttime minimum using a specific temperature and trend from previous day.
- 6) **RH (%) (24 H TREND)** - relative humidity in percent. Afternoon minimums and overnight maximum and trend from previous 24 hours.
- 7) **20FT WND-AM MPH** - Direction is according to an 8 point compass and wind speed in mph.
- 8) **20FT WND-PM MPH** - Direction is according to an 8 point compass and wind speed in mph.
- 9) **PRECIP AMOUNT** - 12 hour precipitation amount forecast in hundredths of an inch.
- 10) **PRECIP DURATION** - length of time in hours that precipitation is occurring.
- 11) **PRECIP BEGIN** - beginning time of precipitation (ex.; 3 pm, or continuing).
- 12) **PRECIP END** - end time of precipitation (ex.; 5 pm)

- 13) **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)

- 14) **LAL (LIGHTNING ACTIVITY LEVELS) -**

1. - No Thunderstorm/Lightning
2. - Few Thunderstorms/Few Lightning Strikes
3. - Widely Scattered Thunderstorms/Scattered Lightning Strikes
4. - Scattered Thunderstorms/Numerous Lightning Strikes
5. - Widespread Thunderstorms/Frequent Lightning Strikes
6. - Dry Lightning {LAL Level 3 or higher with no precipitation}

- 15) **MIXING HEIGHTS** - height above the surface (AGL feet) through which relatively vigorous mixing will take place due to convection. The maximum height in feet of the top of the mixing level during the day.

- 16) **TRANSPORT WINDS** - average wind speed (KTS) and direction from surface to top of mixed layer. Wind direction is according to the 8 point compass.

- 17) **VENTILATION RATE** - this parameter is a product of the mixing height multiplied by the transport wind speed (KT). Higher values would indicate faster dispersion of particulate matter generated fire.

- 18) **REMARKS** - text space to include additional information such as a Fire Weather Watch/Red Flag Warning.

5.1 DISSEMINATION OF THE FIRE WEATHER FORECAST

The fire weather forecast for northern Ohio and Erie and Crawford counties in Northwest Pennsylvania will be available on the Internet through the Cleveland NWS Homepage. The Fire Weather Forecast will also be sent on AWIPS under the WMO header FNUS51.

In Ohio in the event that the Internet link is down, the Division of Forestry in Columbus will contact the NWS office in Wilmington or Cleveland and have the forecast faxed to them. The Division of Forestry will then be responsible for disseminating the forecast to individual districts and other user agencies.

CLE Internet address is:

Cleveland <http://www.erh.noaa.gov/cle> or
<http://www.weather.gov/cle>

The Internet addresses for the other weather offices serving Ohio are:

Charleston, WV <http://www.erh.noaa.gov/rlx> or
<http://www.weather.gov/rlx>

North Webster, IN <http://www.crh.noaa.gov/iwx> or
<http://www.weather.gov/iwx>

Pittsburgh, PA <http://www.erh.noaa.gov/pbz> or
<http://www.weather.gov/pbz>

Wilmington, OH <http://www.erh.noaa.gov/iln>
<http://www.weather.gov/iln>

The Internet addressed for the other weather offices serving Pennsylvania are:

Binghamton, NY <http://www.erh.noaa.gov/bgm> or
<http://www.weather.gov/bgm>

Mount Holly, NJ <http://www.erh.noaa.gov/phi> or
<http://www.weather.gov/phi>

Pittsburgh, PA <http://www.erh.noaa.gov/pbz> or
<http://www.weather.gov/pbz>

State College, PA <http://www.erh.noaa.gov/ctp> or
<http://www.weather.gov/ctp>

6.0 SPOT FORECASTS FOR WILDFIRE SUPPORT

The spot forecast is a site-specific, localized weather forecast available for wildfire support. This product includes a forecast of wind, temperature, humidity and any effects local topography

will have on the weather. The parameters forecast should be the **worst case** scenario expected.

Requests for spot forecasts should come to the WFO via the Internet, see attachment G for more details. The backup method is via phone or fax.

If they use the phone then the information shall be logged on Attachment E. The following information should be exchanged whenever a spot forecast is requested:

The requesting agency will provide the following/ or as per the Internet:

- 1). The name of the agency.
- 2). Location and size of the fire.
- 3). Elevation/Geography/Topography.
- 4). Recent weather observations if any.
- 5). Any additional information that would help the forecaster.

The duty forecaster will provide the following or what was requested via the Internet:

- 1). Time period of forecast (usually for 12 hours).
- 2). Brief synopsis.
- 3). Temperature forecast
- 4). Relative humidity forecast (minimum during the day, maximum at night).
- 5). Wind direction and speed at 20 foot level. State height if other than the 20 foot level.
- 6). Probability of precipitation (POP).
- 7). Mesoscale features associated with thunderstorms/fronts.
- 8). Other weather phenomena deemed important.

This forecast will be provided via the INTERNET or given verbally over the telephone or faxed to the requesting agency (see Attachment F). The forecast will usually be completed within 30 minutes.

7.0 FIRE WEATHER WATCH/RED FLAG WARNING

Specific conditions must be met for a Fire Weather Watch and/or a Red Flag Warning to be issued. In Ohio they are:

- A. Ten hour fuels must be at 8% moisture or less and expected to remain at that level for 2 or more days. (Usually the state will notify the NWS when we reach those conditions).

- B. The afternoon and evening relative humidity levels are expected to fall to 25% or lower and the 20 foot sustained winds are expected to exceed 15 mph (13 knots) for at least 2 hours.

Specific conditions must be met for a Fire Weather Watch and/or a Red Flag Warning to be issued. In Pennsylvania they are:

- A. Ten hour fuels must be at 15% moisture or less and expected to remain at that level for 2 or more days. (Usually the state will notify the NWS when we reach those conditions).
- B. The afternoon and evening relative humidity levels are expected to fall to 30% or lower and the 20 foot sustained winds are expected to exceed 15 mph (13 knots).

A "Fire Weather Watch" is used to alert the user to the possible development of a Red Flag event in the near future. The watch would be issued 12 to 72 hours in advance of the expected onset of criteria.

A "Red Flag Warning" will be issued to warn the user of an impending or on-going Red Flag event. A Red Flag Warning will be issued immediately when Red Flag Conditions are occurring. Otherwise, it will be issued for impending Red Flag Conditions when there is a high degree of confidence that conditions will develop and the forecast time of onset for the event is 24 hours or less from the forecast issuance time. The warning can be issued for all or selected portions within a fire weather zone.

If a Fire Weather Watch or Red Flag Warning is issued, it will be included as a HEADLINE in the **FWF** above the synopsis. Also a statement **CLERFWCLE** will be issued. Zones codes are used. The product expiration time should be 24 hours to coincide with the next issuance of the FWF. The event expiration time for a Fire Weather Watch is set to 24 to 72 hours. The event expiration time for a Red Flag Warning is set within the first 24 hour period. A Red Flag Warning can be issued for the second and third periods if needed.

Because of the restrictions on user programs brought about by a Red Flag Warning, it is imperative that the warning be promptly cancelled when the conditions cease to exist or if the conditions are no longer expected to develop. **A statement (CLERFWCLE) will be needed to cancel the Red Flag Warning or Fire Weather Watch. Also the Red Flag Warning and Fire Weather Watch may be issued after the routine issuance. If this happens**

the Fire Weather Forecast will need to be updated with the headline.

An RFW stating the Fire Weather Watch or Red Flag Warning is cancelled is issued and the FWF is updated to remove the headline.

The watch or warning shall be mentioned in the AFD and HWO.

EXAMPLES:

THESE STATEMENTS SHALL NOT GO ON THE NOAA ALL HAZARDS RADIO, THEY WILL GO TO THE INTERNET AUTOMATICALLY.

FIRE WEATHER WATCH EXAMPLE:

WWUS81 KCLE 131100
RFWCLE

FIRE WEATHER WATCH
NATIONAL WEATHER SERVICE CLEVELAND OH
700 AM EDT WED OCT 13 2005

OHZ003-006>008-017-018-141100-

...FIRE WEATHER WATCH IS IN EFFECT FOR PARTS OF NORTHWEST OHIO FOR THURSDAY...

COUNTIES INCLUDED IN THIS WATCH ARE:
HANCOCK...LUCAS...OTTAWA...SANDUSKY...SENECA AND WOOD.

DISCUSSION...THURSDAY AFTERNOON AND EVENING THE HUMIDITY LEVELS ARE EXPECTED TO FALL TO 25% OR LOWER AND WINDS ARE EXPECTED TO EXCEED 15 MPH THURSDAY. THESE CONDITIONS WILL CAUSE THE THREAT OF WILDFIRES TO BE VERY HIGH.

FIRE OFFICIALS NEED TO TAKE APPROPRIATE ACTION AND MONITOR LATER FORECASTS.

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WWUS81 KCLE 141100
RFWCLE
RED FLAG WARNING
NATIONAL WEATHER SERVICE CLEVELAND OH
700 AM EDT THU OCT 14 2005
OHZ003-006>008-017-018-142300-

...RED FLAG WARNING IS IN EFFECT FOR PARTS OF NORTHWEST OHIO FOR TODAY...

COUNTIES INCLUDED IN THIS WATCH ARE:
HANCOCK...LUCAS...OTTAWA...SANDUSKY...SENECA AND WOOD

DISCUSSION...HUMIDITY LEVELS WILL BE 25% OR LOWER THIS AFTERNOON AND THE WINDS WILL BE FROM THE SOUTH AT 20 TO 30 MPH. THE THREAT OF WILDFIRES WILL BE EXTREMELY HIGH.

FIRE OFFICIALS NEED TO TAKE THE PROPER STEPS TO SAVE LIVES AND PROPERTY.
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EXAMPLE HAVING A FIRE WEATHER WATCH AND A RED FLAG WARNING AT THE SAME TIME.

WWUS81 KCLE 131100
RFWCLE

RED FLAG WARNING/FIRE WEATHER WATCH
NATIONAL WEATHER SERVICE CLEVELAND OH
700 AM EDT WED OCT 13 2005

OHZ003-006>008-017-018-132300-

...RED FLAG WARNING IS IN EFFECT FOR PARTS OF NORTHWEST OHIO FOR TODAY...

COUNTIES INCLUDED IN THIS WATCH ARE:
HANCOCK...LUCAS...OTTAWA...SANDUSKY...SENECA AND WOOD

FIRE OFFICIALS NEED TO TAKE THE PROPER STEPS TO SAVE LIVES AND PROPERTY.
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OHZ012>014-089-141100-

..FIRE WEATHER WATCH IS IN EFFECT FOR PARTS OF NORTHEAST OHIO FOR THURSDAY...

COUNTIES INCLUDED IN THIS WATCH ARE:
ASHTABULA...GEAUGA AND LAKE.

DISCUSSION...THURSDAY AFTERNOON AND EVENING THE HUMIDITY LEVELS ARE EXPECTED TO FALL TO 25% OR LOWER AND WINDS ARE EXPECTED TO EXCEED 15 MPH THURSDAY. THESE CONDITIONS WILL CAUSE THE THREAT OF WILDFIRES TO BE VERY HIGH.

FIRE OFFICIALS NEED TO TAKE APPROPRIATE ACTION AND MONITOR LATER FORECASTS.

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EXAMPLE OF A CANCELLATION:

WWUS81 KCLE 081100
RFWCLE

RED FLAG WARNING
NATIONAL WEATHER SERVICE CLEVELAND OH
1PM EDT THU OCT 9 2005

OHZ003-006>008-017-018-082300-

...RED FLAG WARNING HAS BEEN CANCELLED FOR NORTHWEST OHIO FOR THIS AFTERNOON...

COUNTIES INCLUDED IN THIS WATCH ARE:
HANCOCK...LUCAS...OTTAWA...SANDUSKY...SENECA AND WOOD.

DISCUSSION...SHOWERS AND THUNDERSTORMS MOVED INTO THE AREA QUICKLY AND THAT CAUSED THE HUMIDITY LEVELS TO RISE. THIS WILL DECREASE THE THREAT OF WILDFIRES.

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EXAMPLES OF FORECASTS WITH HEADLINES:

FIRE WEATHER PLANNING FORECAST FOR NORTHERN OHIO AND NORTHWEST PENNSYLVANIA

NATIONAL WEATHER SERVICE CLEVELAND OH
630 AM EDT THU SEP 9 2005

...FIRE WEATHER WATCH FOR NORTHWEST OHIO FRIDAY...

.DISCUSSION...

OHZ003-006>008-017-018-092300-

...FIRE WEATHER WATCH FRIDAY...

ANOTHER EXAMPLE:

FIRE WEATHER PLANNING FORECAST FOR NORTHERN OHIO AND NORTHWEST PENNSYLVANIA
NATIONAL WEATHER SERVICE CLEVELAND OH
630 AM EDT THU SEP 9 2003

...RED FLAG WARNING FOR NORTHWEST OHIO TODAY...

.DISCUSSION...

OHZ003-006>008-017-018-092300-

...RED FLAG WARNING TODAY...

DISSEMINATION AND COORDINATION OF WATCH OR WARNING:

Once it is decided that a Fire Weather Watch or a Red Flag Warning is needed, we need to make only one or two phone calls to a non-National Weather Service Group.

1. We need to coordinate with **NWS ILN, IWX and PBZ if Ohio is involved and PBZ and CTP if Erie and Crawford counties in Pennsylvania are involved.**
2. If the watch or warning is for our **entire Ohio** CWA we call Michael Bowden in Columbus (Rural Fire and Training Coordinator for the state of Ohio) 614-265-1088 (Monday-Friday). No action is necessary on the weekend or holidays.
3. If the watch or warning is more for **Northeast Ohio** including any of the following counties: Richland, Ashland, Holmes, Stark and Knox we call Frank Corona (Assistant District Forester in New Philadelphia) 330-339-2205 (Monday-Friday). No action is necessary on the weekend or holidays.
4. If the watch or warning is more for **Northwest Ohio** including Lucas and Wood we notify Don Schmenk (Maumee State Forest) 1-419-822-3052 (7 days a week, leave a message on the machine on the weekend).
5. If the watch or warning is for **Erie and Crawford Counties in Northwest Pennsylvania** call Denny Kirkpatrick or Bill Dobson in North Warren Pennsylvania (PA Bureau of Forestry) 1-814-723-0262.

Monday through Friday the day shift should make the call around 8 AM. If we get the persons voice mail, we should try to talk to the operator. The only exception is for Northwest Ohio when we can leave a message.

Summary of what to do if we issue a Fire Weather Watch or Red Flag Warning:

1. Coordinate with ILN, IWX, PBZ and CTP if applicable.
2. Be sure the headline is in the FWF.
3. Issue the CLERFWCLE for the initial, continuation and cancellation. An RFW is not needed when a warning expires.
4. Make the appropriate phone call to the state agency for the initial issuance.

8.0 FIRE DANGER RATING

The Ohio Division of Forestry in Columbus will calculate the fire danger ratings for the State of Ohio. The categories of concern are **very high and extreme**. Should the fire danger category reach, change or fall below the very high or extreme categories, then the Division of Forestry will call or FAX the appropriate NWS office(s) listed in Attachment A. A call will be made Monday through Friday when the criteria is reached or has changed. The Division of Forestry will cease calling when the fire danger category falls below **very high**.

The Bureau of Forestry in Harrisburg will calculate the fire danger ratings. The categories of concern are high, very high and extreme. Should the category reach, change or fall below the above categories, then a program specialist with the Pennsylvania Department of Conservation and Natural Resources (PDCNR) will call the weather office/s with NOAA weather radio responsibility in that particular METAFIRE zone. A call will be made daily (including Saturday and Sunday) during the late afternoon to each office affected when the criteria is reached or has changed. The PDCNR will cease calling when the fire danger category falls below high.

8.1 DISSEMINATION OF THE FIRE DANGER RATING

Upon receipt of a very high, or extreme fire danger rating from the state of Ohio or high, very high or extreme fire danger rating from the state of Pennsylvania, the rating shall be broadcast on the appropriate NOAA weather radio station. The appropriate NWS office(s) shall also transmit the high or extreme fire danger rating in a **PUBLIC INFORMATION STATEMENT**

(PNS). The PNS will also be available on the appropriate INTERNET site.

An example of a PNSCLE is shown below for **Ohio**:

CLEPNSCLE
TTAA00 KCLE 051950

PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE CLEVELAND OHIO
330 PM EDT WED MAY 5 2005

THE OHIO DIVISION OF FORESTRY HAS INDICATED THAT THE WILDFIRE DANGER FOR THURSDAY IS VERY HIGH ACROSS NORTHERN OHIO. PEOPLE SHOULD FOLLOW RULES FOR BURNING.
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An example of a PNSCLE is shown below for **Pennsylvania**:

CLEPNSCLE
TTAA00 KCLE 051950

PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE CLEVELAND OHIO
330 PM EDT WED MAY 5 2005

THE PENNSYLVANIA BUREAU OF FORESTRY HAS INDICATED THAT THE WILDFIRE DANGER FOR THURSDAY IS HIGH ACROSS NORTHWEST PENNSYLVANIA. CHECK WITH YOUR LOCAL FIRE DEPARTMENT OR FORESTRY OFFICE TO SEE IF A BURNING BAN IS IN EFFECT.
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9.0 NOAA WEATHER RADIO

The only fire weather products placed on the All Hazards NOAA Weather Radio is some Fire Danger Ratings as per section 8.0.

Ohio has a statewide NOAA Weather Radio network. These 24-hour broadcasts provide continuous up-to-date weather information directly from the NWS. Automated or taped weather messages are repeated every 3 to 6 minutes, and are routinely revised as needed. The broadcasts are tailored to the weather needs of the people within the receiving area. These broadcasts can usually be heard as far as 40 miles or more from the antenna site depending on terrain, receiver quality, and other factors.

NOAA Weather Radio transmitter sites in and near the CLE CWA and their assigned frequency are listed below:

Akron	162.400 Mhz
Bridgeport	162.525 Mhz
Cambridge	162.475 Mhz
Castalia	162.400 Mhz
Chesterland (CLE)	162.550 Mhz
Columbus	162.550 Mhz
Findlay	162.525 Mhz
Fort Wayne (IN)	162.550 Mhz
Grafton	162.500 Mhz
Holland (Toledo)	162.500 Mhz
Lima	162.400 Mhz
Mansfield	162.425 Mhz
Spencer (WV)	162.500 Mhz
Youngstown	162.500 Mhz

NOAA Weather Radio transmitter sites serving northwest **Pennsylvania** and their assigned frequency are listed below:

Erie	162.400 Mhz
Meadville	162.475 Mhz
Parker (Butler)	162.425 Mhz
Warren	162.450 Mhz

Some Fire Danger Ratings will be broadcast on the appropriate NOAA weather radio.

10.0 SURFACE OBSERVATIONS

The following is the list of ASOS observation available in AWIPS and by calling on the phone. See attachment D for a map.

<u>ID</u>	<u>LOCATION</u>	<u>TELEPHONE</u>
CAK Akron-Canton	Akron-Canton	330-966-9545
AKR Akron Municipal	Akron	330-724-4237
HZY Ashtabula County	Ashtabula	440-576-6907
BKL Burke Lakefront	Cleveland	216-241-6904
CVG Greater Cincinnati	Cincinnati	606-767-8210
CLE Cleveland Hopkins	Cleveland	216-267-9955
CMH Port Columbus	Columbus	614-235-2540
DAY Dayton	Dayton	937-454-7845
MGY Dayton General	Dayton	937-885-2171
DFI Defiance Memorial	Defiance	419-658-2301
LHQ Fairfield County	Lancaster	740-681-1097
FDY Findlay Airport	Findlay	419-427-8524
HAO Hamilton-Fairfield	Hamilton	513-863-6137
PHD Harry Clever Field	New Philadelphia	330-339-1125

MFD Lahm Airport	Mansfield	419-522-1375
AOH Lima Allen County	Lima	419-224-6098
LPR Lorain County Regional	Elyria	440-323-7088
LUK Lunken Airport	Cincinnati	513-321-6291
MNN Marion Municipal	Marion	740-383-3400
TDZ Metcalf Field	Toledo	419-838-5034
VTA Newark-Heath	Newark	740-522-1066
OSU Ohio State	Columbus	614-451-2465
TOL Toledo Express	Toledo	419-865-8351
BJJ Wayne County	Wooster	330-669-9105
ILN Wilmington Airpark	Wilmington	937-383-7334
YNG Youngstown-Warren	Youngstown	330-856-9357
ZZV Zanesville Municipal	Zanesville	740-453-8139

In addition to the ASOS observation, Automated Weather Observations (AWOS) are available from the following sites:

<u>ID</u>		<u>LOCATION</u>	<u>TELEPHONE</u>
I28	Ashland-Boyd, KY	Ashland, KY	606-836-2682
UNI	Ohio University	Athens	888-682-4799
EDJ	Bellefontaine Reg.	Bellefontaine	937-599-4654
1G0	Wood Co. Regional AP	Bowling Green	419-354-1415
17G	Crawford Co. Reg. AP	Bucyrus	419-562-0279
CDI	Cambridge Municipal	Cambridge	740-435-0086
LCK	Rickenbacker	Columbus	614-492-2441
TZR	Boulton Field	Columbus	614-878-1722
DLZ	Delaware Municipal	Delaware	740-362-4416
FZI	Fostoria Metro AP	Fostoria	419-436-0053
S24	Sandusky Regional	Fremont	419-547-6932
DUH	Toledo Suburban	Lambertville, MI	734-856-1563
I78	Union County Airport	Marysville	937-644-2967
10G	Holmes County AP	Millersburg	330-674-6279
4I3	Knox County Airport	Mt. Vernon	740-397-6297
OWX	Putnam County AP	Ottawa	419-523-4151
3I2	Mason County Airport	Pt. Pleasant, WV	304-675-4618
PWC	Carl Keller Field	Port Clinton	419-734-9955
PMH	Greater PMH Airport	Portsmouth	740-820-2500
29G,POV	Portage County AP	Ravenna	330-298-9353
16G	Seneca County AP	Tiffin	419-443-1043
VNW	Van Wert County AP	Van Wert	419-232-2967
AXV	Auglaize County AP	Wapakoneta	419-753-2821

In Northwest Pennsylvania and extreme Western New York the following are the ASOS sites and phone numbers.

<u>ID</u>	<u>LOCATION</u>	<u>TELEPHONE</u>
ERI	Erie International	Erie
		814-835-7112

GKJ Port Meadville Airport	Meadville	814-337-2590
BFD Bradford Regional	Bradford	814-368-2581
DKK Dunkirk Airport	Dunkirk	716-366-7664

In Northwest Pennsylvania and extreme Western New York the following are the AWOS sites and phone numbers.

<u>ID</u>	<u>LOCATION</u>	<u>TELEPHONE</u>
FKL Venango Regional PA	Franklin	814-437-2066
JHW Chautauqua County NY	Jamestown	716-366-7664

11.0 REMOTE AUTOMATED WEATHER STATIONS (RAWS)

Remote Automated Weather Stations (RAWS) collect and disseminate weather data used to rate fire danger and monitor air quality. Although there are nearly 2,200 of these sites across the county, there is currently only one RAWS site in the WFO CLE area of responsibility. This station is named **ERIE**, has the identifier of **GMWP1** and is located in Crawford County, Pennsylvania. A second RAWS site is located just west of the WFO CLE area of responsibility in Fulton County, Ohio. This site has the identifier **TS318**, is named **MAUMEE** and is located in the Maumee State Forest. Maumee State Forest includes portions of western Lucas County and northwestern Wood County.

These RAWS stations collect and disseminate weather information on an hourly basis. The types of weather data collected include: temperature, dew point, wind direction, wind speed, precipitation, relative humidity, fuel temperature, peak wind and fuel moisture. The RAWS units forward data to the computer system at the National Interagency Fire Center (NIFC) in Boise,

Idaho via GOES. This data is then forwarded to several other computer systems including the Weather Information Management System (WIMS) and the Western Regional Climate Center in Reno, Nevada.

Station Information

Site Name	Ident	Lat	Long	Elev	NWS Zone	Fire Zone
ERIE	GMWP1	41.6264	79.955	1800ft	PAZ003	CLE003
MAUMEE	TS318	41.5306	83.9294	612ft	OHZ002	IWX002

Accessing RAWs Data

RAWs data can be accessed through various websites, including the National Weather Service National Fire Weather Page at: <http://fire.boi.noaa.gov/> RAWs data is available on this website under the **OBSERVATIONS/RAWS/HAINES INDEX** section data. Select the **ALL U.S. RAWs Data (Text)** link and then scroll down to either Ohio or Pennsylvania depending on which site you would like to look at.

A listing of current and recent observations for the **ERIE** site can be found at: http://raws.wrh.noaa.gov/obs/PA_ERIE.txt

A listing of current and recent observations for the **MAUMEE** site can be found at: http://raws.wrh.noaa.gov/obs/OH_MAUMEE.txt

12.0 AIR TRANSPORTABLE MOBILE UNIT SUPPORT

Large wildfires in Ohio and northwest Pennsylvania may need an incident response. If the situation should arise, the Ohio Division of Forestry or the Pennsylvania Bureau of Forestry would request an AIR TRANSPORTABLE MOBILE UNIT (ATMU). A request for this unit by the state shall be done through the U.S. Forest Service Eastern Area Coordination Center in Minneapolis. The telephone number for the Coordination Center is 612-713-7311.

The ATMU consists of four modules with a combined weight of 300 pounds. A separate MicroREMS (Remote Environmental Monitoring system) unit should be requested. The ATMU provides the equipment and supplies for field meteorological operations. The user agency must provide a relatively clean and dry working environment as well as a normal electric power supply. A static free telephone line is also needed.

The local user agency requesting the on-site forecast service has the primary responsibility for paying for the transportation of the ATMU unit and ATMU meteorologist to and from the incident. The cost can be up to \$350 a day.

13.0 REQUESTS FOR HISTORICAL WEATHER INFORMATION

Agencies requiring historical weather information for specific locations should consult the INTERNET site of the appropriate NWS office as listed in Section 5.2 of this plan. If the information is not available on the INTERNET site, then the agency should contact the appropriate NWS office listed in

Attachment A at the addresses/phone numbers listed in Section 13.0. If the requested historical information is available, the NWS will disseminate the information via telephone, fax or mail, depending on the needs of the user agency. There will be no charge if the request is from a government agency (city/state/federal).

Whenever possible, NWS offices will attempt to disseminate this information at the time of the request with little or no delay. However, because of staffing and/or operational priorities, NWS offices will often not be able to process such requests immediately. User agencies should anticipate such delays and request information as far in advance as possible.

14.0 POINTS OF CONTACT

REGIONAL:

National Weather Service
Eastern Region Headquarters
Leader
Airport Corporate Center
630 Johnson Avenue
Bohemia, NY 11716

Regional Fire Weather
Services Program

Harvey Thurm W/ER1x3
516-244-0124
Fax 244-0167

National Weather Service
Central Region Headquarters
Leader
601 East 12th Street
W/CR1x3
Room 1836
Kansas City, MO 64106-2897

Regional Fire Weather
Services Program

Gary Schmeling
816-426-3239 ext 704
Fax 426-3270

U.S. Forest Service - Region 9
Bishop Henry Whipple Federal Building
1 Federal Drive Room G/20
Fort Snelling, Minnesota 55111

Stephen Marien
Stephen_Marien@nps.gov
612-713-7311

NATIONAL:

NWS HEADQUARTERS
David Billingsley; FWPM
National Interagency Fire Center, NWS
3822 S. Development Avenue, Building 3807
Boise, Idaho 83705-5354
208-334-9824

NATIONAL INTERAGENCY FIRE CENTER
Rick Ochoa Fire Weather Program Manager
3833 South Development Avenue
Boise, Idaho 83705
208-387-5451

WEATHER SERVICE FORECAST OFFICES:

FWFP = FIRE WEATHER FOCAL POINT
WCM = WARNING AND COORDINATION METEOROLOGIST

OHIO (Cleveland)

National Weather Service
Federal Facilities Building
Cleveland Hopkins Airport
Cleveland, OH 44135

FWFP= Will Kubina
WCM = Gary Garnet
216-265-2372
FAX 216-265-2371

OHIO (Wilmington)

National Weather Service
1901 S. State Route 134
Wilmington, OH 45177

FWFP= John Franks
WCM = Mary Jo Parker
937-383-0929
FAX 937-383-0033

INDIANA (North Webster)

National Weather Service
7550 East 850 North
Syracuse, IN 46567

FWFP= Lonnie Fisher
WCM = Mike Lewis
574-834-1183
FAX 574-834-3492

PENNSYLVANIA (Pittsburgh)

National Weather Service
192 Shafer Road
Coraopolis, PA 15108

FWFP= Zaaron Allen
WCM = Richard Kane
412-262-1882
FAX 412-262-1485

PENNSYLVANIA (State College)

National Weather Service
328 Innovation Blvd, Suite 330
State College, PA 16803

FWFP= Bill Gartner
WCM = David Ondrejik
814-231-2405
FAX 814-234-7980

PENNSYLVANIA (Philadelphia)

National Weather Service
732 Woodlane Road
Mt. Holly, NJ 08060

FWFP=
WCM = Joe Miketta
609-261-6604/6610

FAX 609-261-6614

NEW YORK (Binghamton)

National Weather Service
Binghamton Regional Airport
32 Daws Drive
Johnson City, NY 13790

FWFP= Ted Champney
WCM = Dave Nicosia
607-729-7629
FAX 607-798-6624

WEST VIRGINIA (Charleston)

National Weather Service
400 Parkway Road
Charleston, WV 25309

FWFP= Mark Pellerito
WCM =
304-746-0188
FAX 304-746-0193

OHIO DEPARTMENT OF FORESTRY:

Ohio Department of Natural Resources
Division of Forestry
2045 Morse Road, H-1
Columbus, OH 43229

Nathan Kirk
State Fire Coordinator
614-265-6711

Michael Bowden
Fire Supervisor
614-265-1088, FAX 614-447-9231
michael.bowden@dnr.state.oh.us

District 2 Office
952 Lima Avenue
Box B
Findlay, OH 45840
419-424-5004 (Greg Maxfield)
gregg.maxfield@dnr.state.oh.us

Maumee State Forest
3390 County Road D
Swanton, Ohio 43558
419-822-3052 (Don Schmenk)
419-822-9349 (FAX)

donald.schmenk@state.oh.us

District 3 Office
2205 Reiser Avenue SE
New Philadelphia, OH 44663
330-339-2205 EXT 13 (Frank Corona-Assistant District Forester)
330-339-8786 (FAX)
frank.corona@dnr.state.oh.us

PENNSYLVANIA DEPARTMENT OF FORESTRY:

John Miller - Fire Supervisor jmillers@state.pa.us
Division of Forest Fire Protection
Department of Environmental Resources Bureau of Forestry
400 Market Street
P.O. Box 8552
Harrisburg, Pennsylvania 17105-8552
717-787-2925

District Office for Northwest PA

Denny Kirkpatrick or Cecile Stelter
322 N. State Street
North Warren, Pennsylvania 16365
814-723-0262
FAX 814-723-0270
dekirkpatr@state.pa.us
cstelter@state.pa.us

UNITED STATES GOVERNMENT:

Cuyahoga Valley National Recreation Area

15610 Vaughn Road
Brecksville, Ohio 44141
800-433-1986 EXT5995 (Blane Dolges)
440-526-0204 (24 hours)

Erie National Wildlife Refuge

11296 Wood Duck Lane
Guys Mills, Pennsylvania 16327
814-789-3585 (Norma Kline)