

## La Plata Police Department – Emergency Operation Plan

	Title: <b>Weather Related Emergencies</b>		Annex: <b>EOP-32</b>	
	Effective Date: March 21, 2014	Review Date:		
	<input checked="" type="radio"/> <b>New</b>			
Approved by: <b>Chief Carl Schinner</b>			CALEA 5 <sup>th</sup> Edition	
CALEA Standard: 46.1.2			Pages: 12	

**01 PURPOSE:** The purpose of this annex is to supplement the *Natural-and-Man-Made Disasters* portion of the Emergency Operations Plan. Used in conjunction with the La Plata Police Department’s emergency plans, this annex provides general guidelines for use by first-responders to prepare for and respond to emergencies or incidents caused by or resulting from severe weather conditions. These guidelines are intended to be flexible since no two situations are the same, and to allow first-responders to adapt to rapidly changing conditions.

**02 ASSUMPTIONS:** In any weather-related emergency, the potential exists for disruptions in electrical power, telephone service, medical supplies and devices, fuel disbursement, transportation and access thereto, and business.

- A. For any significant weather-related emergency that is anticipated or is occurring, the mobilization of La Plata police personnel (sworn and non-sworn) is likely to ensure an appropriate level of staffing in order to deal with a variety of situations caused by the weather.
- B. As described in this Annex, weather-related emergencies include, but are not limited to, winter storms, hurricanes, tornadoes, severe thunderstorms, drought conditions, and unhealthy air quality.
- C. If a winter storm lasts more than one or two days, there is a greatly increased possibility of utility failures and interruption of services. This can lead to extreme hardship and even death from extended exposure to cold temperatures. Heavy snowfall and blizzards can trap motorists in their vehicles, cause major traffic congestion and collisions, and trap people in their homes, especially those persons who are considered *essential* (i.e., emergency room doctors and nurses; police and fire/rescue personnel, etc.). Ice storms can break power lines, causing widespread blackouts. Fire during winter storms presents a great danger because water supplies may freeze and fire-fighting equipment may not be able to get to the fire. One of the more serious dangers associated with any winter storm is the threat of physical exertion that can lead to heart attacks and strokes.

- D.** Hurricanes can strike any coastal areas along the Atlantic Ocean. On average, six Atlantic hurricanes occur each year. Most occur in August, September, and October, but the six-month period from June 1 to November 30 is considered the Atlantic hurricane season. Usually confined to coastal areas, they may spawn tornadoes further inland, and heavy rains from feeder bands. Long-term hazards come in the form of interrupted gas, water, electric power, fire and explosions from gas leaks, fallen power lines, electrical short circuits, and contaminated food and water.
- E.** Tornadoes are relatively short-lived local storms. Tornadoes develop during severe thunderstorms and hurricanes. While not all thunderstorms and hurricanes create tornadoes, the potential is there. The immediate threat from tornadoes is danger to life and damage to property from violently swirling winds and debris hurled through the air by the winds. Long-term risks include the possibility of building collapse, fallen trees and power lines, broken gas lines, broken sewer and water mains, and the outbreak of fires.
- F.** Thunderstorms are a violent form of convection, which is a process in which cold upper air sinks and warm, moist air rises. As the warm air rises, storm clouds known as *thunderheads* develop. These clouds make thunderstorms that bring strong winds, lightning, hail, and rain. Lightning, the discharge of electricity within the storm cloud, always accompanies a thunderstorm.
- G.** Droughts occur when there is no substantial rainfall for a long period of time. A prolonged drought can have serious economic impact on a community. Increased demand for water and electricity can result in shortages.
- H.** Ground level ozone presents a serious air quality problem in the metropolitan Washington area. High ozone levels usually occur between 1 p.m. and 7 p.m. from May through September. Since 1990, the region's air violated federal health standards an average of six days each summer. Ozone is a major element of urban smog. It can lower resistance to diseases such as colds and pneumonia, damage lung tissue, intensify heart and lung disease, and can cause coughing and throat irritation. Even healthy adults, who perform heavy physical exercise or manual labor outdoors, experience the unhealthful effects of ozone.

**03 PLAN:**

- A.** Winter Storms: There are three categories of winter storms: Blizzard, Heavy Snowstorm, and Ice Storm.
- B.** Definitions:

1. A Blizzard is the most dangerous of all winter storms. It combines low temperatures, heavy snowfall, and high winds that blow snow into drifts and reduces visibility to only a few yards.
2. A Heavy Snowstorm is one that drops four or more inches of snow in a 12-hour period, or six or more inches in a 24-hour period.
3. An Ice Storm occurs when moisture falls from clouds and freezes immediately upon impact. This type of storm makes driving and even walking extremely hazardous.

C. The National Weather Service (NWS) issues watches and warnings for hazardous winter weather. Below are the terms used and their definitions:

Winter Storm Watch	Severe winter weather may affect the area
Winter Storm Warning	Severe winter weather conditions are expected
Ice Storm Warning	Significant, possibly damaging ice accumulation expected
Heavy Snow Warning	Snowfall of at least 4 inches in 12 hrs or 6 inches in 24 hrs
Blizzard Warning	Large amounts of falling or blowing snow and winds of at least 35mph expected for several hours
Severe Blizzard Warning	Considerable falling or blowing snow , winds of at 45mph, and temperatures of 10 degrees Fahrenheit or lower are expected for several hours
High Wind Warning	Winds of at least 40mph are expected to last at least 1 hour
Traveler’s Advisory	Ice and snow are expected to hinder travel, but the anticipated weather conditions are not serious enough to require warnings

D. ON-DUTY SHIFT SUPERVISORS SHOULD:

1. Develop pre-plans at the squad or shift level to meet changing situations (i.e., food, rest periods for personnel; assignment of personnel to specific areas or to “fixed” positions unless dispatched to a call).
2. Evaluate staffing requirements to ensure an adequate level of staffing (i.e., minimum staffing).
3. Evaluate equipment needs to ensure all personnel on-duty are adequately equipped and prepared.

4. Monitor existing and anticipated weather conditions for possible activation of the Department’s Emergency Mobilization Plan.
5. Arrange for deployment of 4-wheel-drive vehicle(s) and consider staffing them with two (2) officers, if possible.
6. Ensure coordination with Public Works, especially snow removal crews (roster of on-call person in Administrative area of station).
7. Ensure that any officer directing or controlling traffic wears high-visibility clothing and plan for relief for those officers.
8. Determine availability of traffic cones, arrow/message boards, barricades, portable signs, etc., and determine if any can safely take the place of an officer directing or controlling traffic.
9. Notify the on-call commander of any damage caused by any storm so that a report to the National Weather Service can be prepared.
10. Determine the need to evacuate persons from damaged homes or homes that are unsafe, unsanitary, or unnecessarily threaten the health of occupants.
11. Consider the need for allied agency assistance (Maryland State Police, Charles County Sheriff’s Department, etc.).
12. Be cognizant of nursing and assisted-living facilities and other locations that house vulnerable populations. These facilities may lose power and the need to be evacuated. Such locations include:

**04** Hurricanes: As a hurricane approaches, skies will gradually darken and winds will continue to grow in velocity. The barometric pressure (barometer reading) will fall, winds will increase, and heavy rain in the form of torrential downpours will fall. The National Hurricane Center in Miami monitors weather data and issues forecasts for hurricanes in the Atlantic Ocean, Caribbean Sea, Gulf of Mexico, and the eastern Pacific Ocean. Below are the terms used to convey hurricane emergency information and their definitions:

Hurricane Advisory	Tells where the storm is located, wind intensity and speeds, and direction of movement
Hurricane Watch	Is issued for a coastal area when there is a threat of hurricane conditions within 24 to 36 hours. In some more vulnerable areas, actions for the protection of life and property should begin at this stage.

Hurricane Warning	Is issued when hurricane conditions are expected in a specified coastal area within 24 hours or less. Hurricane conditions include winds of 74mph (64 knots) and/or dangerously high tides and waves. Final actions for the protection of life and property should be completed as quickly as possible before winds and heavy rains arrive.
-------------------	---

The intensity of hurricanes is rated on the Saffir-Simpson Hurricane Scale. This scale rates hurricanes by their wind speeds, barometric pressure, storm surge height, and damage potential. There are five (5) ratings or categories:

Category Rating	Wind Speed	Barometric Pressure	Storm Surge	Damage Potential
1 (Weak)	75 - 95 MPH	28.94” or more	4 to 5 feet	Minimal damage to vegetation
2 (Moderate)	96 - 110 MPH	28.50”-28.93”	6 to 8 feet	Moderate damage to homes
3 (Strong)	111 – 130 MPH	27.91”-28.49”	9 to 12 feet	Extensive damage to small buildings
4 (Very Strong)	131 – 155 MPH	27.17”-27.90”	13 to 18 feet	Extreme structural damage
5 (Devastating)	155 MPH or Greater	27.17” or Less	18 feet or Greater	Catastrophic building failures

**A. ON-DUTY SHIFT SUPERVISORS SHOULD:**

1. Consider all actions in D1 of this Annex.
2. Monitor existing and anticipated weather conditions for possible activation of the Department’s Emergency Mobilization Plan.
3. Ensure that PSCC is notified (and Media, too) of any road closures, and ensure the closure of any roads deemed unsafe due to high water, downed power lines, fallen trees, or any condition that threatens public safety.

**05** Tornadoes: Tornadoes occur as single storms, but sometimes several can develop at the same time. The National Severe Storms Forecast Center in Kansas City, Missouri, issues tornado watches. The National Weather Service (NWS) issues tornado warnings. Below are the terms used and their definitions:

Tornado Watch	Indicates that conditions are right for a tornado to develop and that the sky should be watched
Tornado Warning	Indicates that a tornado has been sighted or has been spotted on radar. The Warning will give the location of the tornado and the area immediately affected by the warning

- A. The intensity of tornadoes has been rated since 1971 using the Fujita-Pearson Tornado Scale (FPP Scale). The FPP Scale uses six categories to rate tornado intensity by examining the damage caused by the tornado **after** it has passed over a man-made structure and by measuring approximate path length and width. The size of a tornado’s funnel is not an indication of its intensity.
- B. Officers (first responders) must be alert to downed power lines and treat them as energized, unless they know for a fact that the lines have been de-energized.
- C. With the exception of life-saving efforts by first responders, areas of damage should be preserved to assist subsequent responders and investigators.

Category Rating	Wind Speed	Path Length	Path Width	Damage Potential
F0 Gale Tornado	40 – 72 MPH	0.3 – 0.9 Miles Long	6 to 17 Yards Wide	Light damage to chimneys; tree branches broken; signs damaged
F1 (Moderate)	73 – 112 MPH	1.0 – 3.1 Miles Long	18 to 55 Yards Wide	Moderate damage to homes; moving autos pushed off road; garages may be destroyed
F2 (Significant)	113 – 157 MPH	3.2 – 9.9 Miles Long	56 to 175 Yards Wide	Considerable damage; entire roofs torn from frame houses; rail cars pushed over; large tree

F2 continued				snapped or uprooted; light-object missiles generated
F3 (Severe)	158 – 206 MPH	10 – 31 Miles Long	176 to 566 Yards Wide	Severe damage; walls torn from well-constructed houses; trains overturned; most trees in forests uprooted; heavy cars lifted off ground and thrown
F4 (Devastating)	207 – 260 MPH	32 – 99 Miles Long	0.3 – 0.9 Miles Wide	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated
F-5 (Incredible)	261 – 318 MPH	100 – 315 Miles Long	1.0 – 3.1 Miles Wide	Strong frame houses lifted off foundations and carried very long distances and disintegrate; automobile-sized missiles fly through the air 100 yards or more; many trees debarked; many steel-reinforced structures badly damaged.

**D. ON-DUTY SHIFT SUPERVISORS SHOULD:**

1. Apply to tornadoes the same considerations listed in section D1 of this Annex, except for those that would only be applicable during cold weather or winter storms. In addition, supervisors should:
  - a. Ensure that the area that was the tornado’s path is preserved and protected for investigators.
  - b. Ensure that the area is secured to protect damaged property from theft and looting.

**06 Severe Thunderstorms:** Thunderheads may be miles across at the base and reach heights of 40,000 feet or more. They can dump large amounts of rain or hail on localized areas. Violent lightning can strike the ground several miles away from its parent cloud. In addition, tornadoes and flash floods can be caused by thunderstorms.

- A. There are at least 100,000 thunderstorms annually across the United States. Statistics show that an average of more than 100 people are killed, and about 250 are injured, each year by lightning. At any given moment, nearly 2,000 thunderstorms are in progress over the earth’s surface. Their frequency and potential for violence make them one of nature’s greatest killers and destroyers.
- B. The National Severe Storms Forecast Center issues severe thunderstorm watches. Local National Weather Service offices issue warnings and statements about severe weather and localized storms. Below are the terms used and their definitions:

Severe Thunderstorm Watch	Means that conditions are right for lightning and/or damaging winds greater than 58MPH, hail that could reach a diameter of three quarters of an inch, and heavy rain
Severe Thunderstorm Warning	Means that severe thunderstorms have been sighted in the area

**C. ON-DUTY SHIFT SUPERVISORS SHOULD:**

1. Apply to severe thunderstorms the same considerations listed in section D1 of this Annex, except for those that would only be applicable during cold weather or winter storms. In addition, supervisors should:

- a. Develop pre-plans at the shift or squad level to meet changing situations (i.e., food, rest periods for personnel), including minimizing officer exposure to lightning.
- b. Determine availability of traffic cones, arrow/message boards, barricades, portable signs, etc., and determine if any can safely take the place of an officer directing or controlling traffic (the exposure of officers to lightning must be minimized).
- c. If LPD personnel and/or others are unable to reach a building or vehicle in order to take shelter, caution them about standing beneath a natural lightning rod such as a tall, isolated tree in an open area. They should also be warned to stay out of and away from open water; stay away from motorcycles, golf carts, and bicycles; stay away from wire fences, metal pipes, rails, and other metallic paths that could carry lightning to a person from some distance away.
- d. If providing care for a person struck by lightning, be aware that a person struck by lightning may receive a severe electrical shock and may suffer burns; however, the person will carry no electrical charge and can be handled safely. Fire/Rescue should be summoned immediately, even before any CPR begins (so rescuers are on their way while emergency care is provided).
- e. If a person struck by lightning is not breathing, begin resuscitation efforts immediately.
- f. If a person struck by lightning appears only to be stunned or otherwise uninjured, they should still be checked for burns, especially to fingers and toes and next to buckles and jewelry.
- g. Survey the Town for any damage caused by the storm and notify the on-call Commander if severe damage is found so that a report can be submitted to the County for the National Weather Service.

**07 Drought and Extreme Heat:** Usually caused by a lack of substantial rainfall over a long period of time, a drought is usually accompanied by periods of extreme heat. Extreme Heat is defined as temperatures 10 degrees or more above the average high temperature, lasting several weeks. There are three (3) stages of danger from extreme heat:

Strain	Occurs when hot weather and/or exertion threaten to raise the body's core temperature above 99 degrees Fahrenheit
Impairment	Occurs when the body temperature approaches 102 degrees Fahrenheit,

Impairment continued	creating an abnormal internal state that disrupts normal physical and mental functions
Emergencies	When heat strain from overexposure lasts too long or becomes too severe, collapse from water depletion, heatstroke, or heart attack occur

The following are heat impairment symptoms:

Heat Disorder	Symptoms	First Aid
Heat Cramps	Painful spasms usually in muscles of legs and abdomen. Heavy sweating.	Firm pressure on cramping muscles or gentle massage to relieve spasm. Give sips of water. If nausea is present, discontinue water
Heat Exhaustion	Heavy sweating, weakness, skin cold, pale, and clammy. Pulse thready. Normal temperature possible. Fainting and vomiting.	Get victim out of sun. Lay victim down. Apply cool, wet cloths, fan or move victim to air conditioning. Give sips of water, unless nauseated. If vomiting, seek immediate medical attention.
Heat Stroke	High body temperature (106 degrees Fahrenheit or higher). Hot and dry skin. Rapid and strong pulse. Possible unconsciousness.	Heat stroke is true medical emergency. Seek immediate medical attention. Delay can be fatal.  Move victim to a cooler environment. Use extreme caution.

A. **ON-DUTY SHIFT SUPERVISORS SHOULD:** Apply to droughts and extreme heat conditions the same considerations section D1, except for those that would only be applicable during cold weather or winter storms. In addition, supervisors should:

1. Ensure that on-duty personnel are appropriately equipped and are wearing appropriate uniforms.
2. If working in direct sunlight, as much skin as possible should be covered and a sunscreen lotion with a rating of 15 or above should be used,

3. If a proclamation has been issued restricting the use of water, determine how and by whom the restrictions will be enforced,
4. Monitor on-duty personnel who are engaged in law enforcement operations in the high heat and humidity and ensure appropriate relief for them.
5. Be cognizant that fires have the potential to spread rapidly, erratically, and can consume acres quickly.
6. Monitor on-duty personnel so that they pace themselves while working. Personnel should replace sweat by drinking water to keep body fluid volume and salt level as close to normal as possible.

**08 Unhealthy Air Quality:** Ozone concentrations can reach unhealthful levels when the weather is hot and sunny with little or no wind. High concentrations of ozone may cause severe respiratory problems on days when the air quality is poor and the Air Quality Index is high. Established by the Metropolitan Washington Council of Governments (COG), the following table is an Air Quality Index Guide:

Air Quality Index	Air Quality Rating	Weather Conditions	Recommended Actions
0 – 50	Code Green (Good)	<ul style="list-style-type: none"> <li>• Cool temperatures in the mid 70’s to mid 80’s</li> <li>• Windy conditions</li> <li>• Heavy or steady rain</li> <li>• Passing cold front carries pollution out of area</li> </ul>	None
51 – 88	Code Yellow (Moderate)	<ul style="list-style-type: none"> <li>• Mild temperatures in the upper 70’s to mid 80’s</li> <li>• Light to moderate winds</li> <li>• High pressure system with partly cloudy skies</li> </ul>	None
89 – 99 89-99	Code Orange (Approaching Unhealthful)	<ul style="list-style-type: none"> <li>• Temperatures in the upper 80’s to low 90’s</li> <li>• Light winds</li> </ul>	None

		<ul style="list-style-type: none"> <li>• Slow moving high pressure system with sunny skies</li> </ul>	
100+	Code Red (Unhealthful)	<ul style="list-style-type: none"> <li>• Hot temperatures – mid 90’s to 100’s</li> <li>• Stagnant air, little or no wind</li> <li>• Little chance of rain</li> <li>• Stationary high pressure system with sunny skies</li> </ul>	<ul style="list-style-type: none"> <li>• Healthy individuals should limit any strenuous outdoor work or exercise</li> </ul>

**A. ON-DUTY SHIFT SUPERVISORS SHOULD:** Apply to unhealthy air quality the same considerations section D1, except for those that would only be applicable during cold weather or winter storms. In addition, supervisors should:

1. Develop pre-plans at the shift or squad level to provide for relief of officers who may be assigned to direct traffic for extended periods, or are engaged in law enforcement operations outdoors during extended periods.
2. Ensure that on-duty personnel are appropriately equipped and are wearing appropriate uniforms.

**INFORMATION SOURCES**

Emergency Preparedness U.S.A. Federal Emergency Management Agency  
Washington, D.C. 1994

“Stormfax Weather Almanac”, Internet <http://www.stormfax.com/fujita.htm>  
20 December 2001

“Hurricane Intensity Scale”, Internet <http://www.srcc.lsu.edu/OEP/hurr-scale.html>  
20 December 2001

Metropolitan Washington Council of Governments (COG)  
Air Quality Forecast and Action Guide  
(Pamphlet). Washington, D.C., 1998