

Lane Manual  
CHAPTER 54 CONTENTS

EMERGENCY OPERATIONS PLAN

- 54.005 General Information.
- 54.010 Emergency Management Organization.
- 54.015 Authority and References.
- 54.020 Emergency Declaration.
- 54.025 Emergency Operations Center.
- 54.030 General Concepts of Operations.
- 54.040 Hazard Analysis.

## Chapter 54

### EMERGENCY OPERATIONS PLAN

#### **54.005 General Information.**

Pursuant to the provisions of Oregon Revised Statutes Chapter 401, the responsibility for preparation and response to major emergencies within Lane County is vested with the Board of County Commissioners.

The Lane County Emergency Operations Plan is a document which provides the basic framework to guide departments, agencies, and organizations for carrying out specific actions at projected times and places in an emergency or disaster.

The Basic Plan identifies authorities and references, defines operational conditions, describes the County Emergency Management Organization, assigns emergency responsibilities, and provides a concept of operations utilizing the National Incident Command Systems (NIMS).

Annexes outline specific emergency support functions, assign tasks, and describe methods by which emergency functions will be accomplished.

Appendices supplement information and actions outlined in the Plan and Annexes by providing guidelines to assist in carrying out appropriate emergency activities under specific emergency conditions (contingency plans) or by detailing specific operating procedures.

It is understood that no plan can replace the common sense and good judgment necessary for effective response under a variety of emergency conditions. For this reason, the Emergency Operations Plan (EOP) is intended as a guideline for response to major emergencies. Deviations from this Plan may occur depending on the scope and magnitude of the emergency; the area and population affected; the availability of resources; or whenever, in the judgment of responding public safety officials, such deviation is critical for the protection of life, the infrastructure, the environment and property.

This Plan is issued under the authority of the Lane County Board of Commissioners at the recommendation of County officials. The plan shall be reviewed at least biannually with formal adoption of the revised plan scheduled in odd-numbered years. Revisions to the annexes and appendices shall be made as needed and require no formal action by the Board. All tasked County departments and other agencies or organizations, as appropriate, shall review the plan and annexes biannually.

Lane County Emergency Management shall distribute revisions to the Emergency Operations Plan, annexes and appendices to County Departments and other agencies, as appropriate. Not all procedures, notification lists, and checklists will be distributed to all Plan holders. Confidential information or that requiring frequent updating will be available in the Master EOP maintained by the Emergency Manager and available at the County Emergency Operations Center (EOC).

The Basic Plan can be found on the Lane County Internet website and a full version of the plan (Basic Plan and Annexes) will be maintained on the Lane County Intranet. A hard copy of the Plan is located in the Emergency Operations Center located in the Sheriff's Office. All Department Directors shall be provided a copy of the Plan. *(Revised by Order 94-2-15-7; Effective 2.15.94; 07-10-24-7, 10.24.07)*

#### **54.010 Emergency Management Organization.**

All departments of the County, plus other agencies or individuals, who may perform specialized emergency functions, are a part of the County's Emergency Management

Organization. However, emergency response activities are directed under the authority of two primary groups in County government as follows:

- (1) Policy Group – responsible for the disaster declaration process
  - (a) Board of County Commissioners
  - (b) County Administrator
  - (c) County Counsel
- (2) Incident Management Group – directs all response activities
  - (a) Lane County Sheriff
  - (b) Public Works Director
  - (c) Health and Human Services Director
  - (d) County Assessor
  - (e) Fire Defense Board Chair
  - (f) County Administration
  - (g) Lane County Emergency Management

These two groups are responsible for managing and responding to major emergencies and disaster events and have distinct responsibilities and duties. The Policy Group will report to the Board of County Commissioners conference room as needed. Upon the decision to activate the Lane County Emergency Operations Center (EOC) the Incident Management Group will report to the EOC and manage all emergency response activities. They will activate additional EOC staff positions as needed.

The major responsibilities of each group are as follows:

- (1) Policy Group
  - (a) Convene Board of County Commissioners for emergency session(s) if needed.
  - (b) Communicate with and coordinate efforts with elected officials from other government entities.
  - (c) Declare county state of emergency and request governor's declaration of emergency through Oregon Emergency Management as necessary.
  - (d) Make decisions regarding which county services will be curtailed during emergencies and when those services will be restarted.
  - (e) Provide policy guidance.
  - (f) County counsel reviews major response activities for legal and liability issues.
- (2) Incident Management Group.
  - (a) Overall management of emergency response activities.
  - (b) Ensuring that the Incident Command System has been implemented on-scene.
  - (c) Ensuring responder safety.
  - (d) Disseminating information to the public and media through the Public Information Officer or designee.
  - (e) Coordinating activities of all agencies responding to the incident.
  - (f) Securing necessary resources.
  - (g) Documenting response activities.
  - (h) Restoring critical services as soon as possible.

The major responsibilities of each department represented by the Incident Management Group include:

- (1) Sheriff's Office
  - (a) Law enforcement
  - (b) Warning Services
  - (c) Communications
  - (d) Evacuation

- (e) Crowd control
- (f) Crime scene investigations
- (g) Search and rescue
- (2) Public Works
  - (a) Debris management
  - (b) Road and bridge damage assessment and repair
  - (c) Removal of roadway obstructions
  - (d) Fleet services
  - (e) GIS mapping
- (3) Assessment & Taxation
  - (a) Rapid damage assessment
  - (b) Initial damage assessment
  - (c) Preliminary damage assessment
  - (d) Structural assessment of building and infrastructure
- (4) Health & Human Services
  - (a) Communicable disease outbreaks
  - (b) Safety of food and water
  - (c) Mental health services
  - (d) Social service coordination
  - (e) Shelter and mass care
  - (f) Special needs population
  - (g) Strategic National Stockpile
  - (h) Medical examiner
- (5) Lane County Fire Defense Board
  - (a) Fire response
  - (b) Emergency medical services
  - (c) Technical rescue
  - (d) Evacuation
  - (e) Hazardous materials
- (6) Emergency Management
  - (a) Regulatory compliance
  - (b) EOC functions
  - (c) Activity coordination
  - (d) Volunteer coordination
- (7) County Administration
  - (a) Public information
  - (b) Information systems
  - (c) Management services

Guidelines for determining the lead agency or county department for an incident are as follows:

- (1) Lane County Sheriff's Office
  - (a) Domestic Terrorism
  - (b) Transportation, mass casualty incident
- (2) Public Works Department
  - (a) Snow/Ice Storm
  - (b) Flood
  - (c) Windstorm
  - (d) Earthquake-Tsunami
  - (e) Volcanic Ash
- (3) Presiding Fire Service Agency
  - (a) Wildfire

- (b) Hazardous Materials Incident
- (4) Health & Human Service Department
  - (a) Biological Incident
  - (b) Communicable Disease Outbreak

The lead agency or department will establish an on-scene field command post for implementing the Incident Command System. The on-scene response activities should be communicated to, and coordinated with, the Emergency Operations Center. *(Revised by Order 94-2-15-7; Effective 2.15.94; 07-10-24-7, 10.24.07)*

#### **54.015 Authority and References.**

The authority for the provisions of preparing and maintaining the Plan are as follows:

- (1) Federal
  - (a) Federal Civil Defense Act of 1950, Public Law (PL) 81-950 as amended.
  - (b) The Disaster Relief Act of 1974, PL 93-288 as amended.
  - (c) Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 93-288, as amended by PL 100-707.
  - (d) Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), PL 99-499 as amended.
  - (e) Code of Federal Regulations (CFR), Title 44. Emergency Management Assistance.
  - (f) Executive Order (EO) 12148 of July 20, 1979, as amended, Federal Emergency Management.
  - (g) EO 12472 of April 3, 1984, Assignment of National Security and Emergency Preparedness Telecommunications Functions.
  - (h) EO 12656 of November 18, 1988, Assignment of Emergency Preparedness Responsibilities.
  - (i) Federal Preparedness Circular 8, June 22, 1989, Public Affairs in Emergencies.
  - (j) Homeland Security Act of 2002.
  - (k) National Response Plan.
  - (l) Homeland Security Presidential Directive 5 (HSPD-5) Management of Domestic Incidents.
  - (m) Homeland Security Presidential Direct 8 (HSPD-8) National Preparedness.
  - (n) DHS National Incident Management System, March 1, 2004, Department of Homeland Security.
- (2) State
  - (a) Oregon Revised Statutes (ORS) Chapter 401.
  - (b) Oregon Emergency Operations Plan and Oregon State Fire Mobilization Plan.
  - (c) Oregon Homeland Security State Strategy, March 2007.
- (3) Local
  - (a) Lane Manual Chapters 3.044(5) and 54 as amended.
  - (b) Ordinances and Emergency Operations Plans of municipalities within Lane County.
  - (c) Board of County Commissioners Resolution and Order No. 05-9-13-12, In the Matter of Adopting a Revised Emergency Operations Plan for Lane County and the National Incident Management System (NIMS). *(Revised by Order 94-2-15-7; Effective 2.15.94; 07-10-24-7, 10.24.07)*

**54.020 Emergency Declaration.**

Under ORS 401, the Lane County Board of Commissioners has the legal authority to declare that a local emergency or disaster exists. Declaration of a local disaster enables the Board of Commissioners to invoke emergency authorities and to request additional resources from State or Federal government.

A quorum of three Commissioners must be assembled to consider and vote on the emergency. If the Commissioners are unable to assemble a quorum to act on a Declaration due to absence or incapacity, the following line of succession shall be used:

- (1) Chair of the Board of County Commissioners
- (2) Vice Chair of the Board of County Commissioners
- (3) Commissioners by seniority
- (4) County Administrator
- (5) Sheriff
- (6) Under Sheriff
- (7) Emergency Manager
- (8) Sheriff's command staff line of succession

The declaration of a local emergency must include a description of the situation and existing conditions that warrant the declaration, the geographic boundaries of the emergency area, the special powers being invoked or the emergency controls to be imposed by the County. The effective period for the declaration must also be specified (i.e. for 72 hours). The emergency period can be extended if emergency conditions still exist after the effective period expires. If state or federal assistance is needed, it must also declare that all appropriate and available resources have been expended, and contain a request to the Governor for the type of assistance required.

Requests must include:

- (1) Description of the mission to be accomplished,
- (2) Types of assistance needed,
- (3) Certification that all resources have been expended, and
- (4) Preliminary assessment of property damage or loss, injuries and deaths.

When a city is impacted by a disaster and needs assistance beyond that provided by mutual aid agreements, the governing body of the city may declare an emergency and request assistance from the County. Any such request will include the information shown above. If the County is unable to provide the assistance requested, the County may declare a local emergency and request that the Governor declare an emergency. Lane County may add its support to the request, request that additional areas or services be included, or pass the request through to the state without any comment.

The State of Oregon has the option of declaring a State of Emergency and can only authorize activation of state resources in support of the incident. The State can declare a State of Emergency and begin negotiations with FEMA for a Federal Disaster Declaration.

The Emergency Manager will initiate a declaration of an emergency in Lane County and the following documents will be forwarded to the Board for action:

- (1) Board Order declaring an emergency,
- (2) Supporting documentation as determined necessary by the County Administrator,
- (3) Draft letter to the Governor requesting state declaration and specifying nature of the problem and the amount and types of assistance needed and certifying that local resources have been expended ,
- (4) An assessment of injuries, deaths, damage and current situation.

Requests for state assistance will be forwarded to Oregon Emergency Management as soon as practical. These requests may be sent by FAX (with original

signed documents forwarded later) by mail, or may be hand delivered. *(Revised by Order 94-2-15-7; Effective 2.15.94; 03-11-12-10, 11.12.03; 07-10-24-7, 10.24.07)*

#### **54.025 Emergency Operations Center.**

The primary Lane County Emergency Operations Center (EOC) is located within the Sheriff's Office section of the Lane County Public Service Building, which is located at 125 East 8th Avenue, Eugene, Oregon. If the area of the emergency includes the primary EOC, the secondary EOC is the Lane County Public Works "Veneta Shops" located at 25398 Jeans Road, Veneta, Oregon. If environmental conditions do not allow direction and control functions to be conducted from any of the above facilities, alternate locations will be identified, selected and announced.

The Lane County EOC serves several functions. In a major disaster, it may serve the following functions simultaneously:

- (1) Provide a location from which County agencies may coordinate the delivery of their own services during an emergency;
- (2) Provide a facility from which discipline-specific emergency support activities (such as search and rescue or conflagration act mobilizations) may be coordinated;
- (3) Serve as a coordination point for the support of jurisdictions impacted by localized or area-wide emergencies requiring assistance from county, state or federal agencies; and
- (4) During major emergencies or disasters, serve as the interface between city governments and special districts and state and federal agencies.

Depending on the scope of the emergency, each incident scene may have an Incident Commander (IC) assigned or a jurisdictional IC may be designated and local EOC activated to coordinate that jurisdiction's response. Local ICs will request assistance from the County EOC, which will be managed by the EOC Manager.

The EOC Manager's function will be assumed by the Emergency Manager or other Sheriff's designee. In most cases, representatives of a number of involved emergency response organizations will participate in the direction and control of emergency operations.

Each County department and the Lane County Fire Defense Board will designate personnel, as required, to serve as part of the command and general staff in the EOC.

These representatives shall be trained to function under the National Incident Management System (NIMS). The EOC may be activated by the on-scene Incident Commander, Sheriff, Emergency Manager, or Fire Defense Board Chief. When the EOC is activated, members of the command and general staff shall be notified to report to the EOC.

Because of the wide scope of activities and responsibilities that may be conducted from the County EOC, it is difficult to apply the textbook concepts of the NIMS Incident Command System in the EOC. Rarely will true "command" authority be exercised from the EOC. However, a major disaster may require that county staff exercise direction and control over county incidents and resources, while concurrently providing planning and logistical support to other impacted jurisdictions within the county. *(Revised by Order 94-2-15-7; Effective 2.15.94; 07-10-24-7, 10.24.07)*

#### **54.030 General Concepts of Operations.**

- (1) Law Enforcement (Annex A). During an emergency, the Lane County Sheriff's Office will protect life and property; maintain law and order; regulate vehicle traffic; conduct search and rescue operations; lead or assist with evacuations; respond to

terrorist incidents; and, upon request, assist other agencies in their duties regarding the emergency.

(2) Fire and Emergency Medical Services (Annex B). The City of Eugene and City of Springfield Fire Departments provide emergency fire services to the most densely populated and developed areas of Lane County. The Eugene and Springfield Fire Departments along with much of the remainder of Lane County's fire protection is within the jurisdictions of the agencies that make up the Lane County Fire Defense Board and Western Lane/Douglas County's Fire Defense Board. The Oregon Department of Forestry is responsible for fire protection on state owned forest land. The Bureau of Land Management and U.S. Forest Service are responsible for national forest lands. Some areas within Lane County are without fire protection but adjoining fire protection agencies may elect to provide fire suppression service and then recover their costs from the responsible party as per (ORS 476.280, 476.290, 478.310).

(3) Public Works (Annex C). The Public Works Department will serve as lead agency for operation, protection and restoration of the County road system. It will serve in a support role, and provide assistance to other agencies and Departments, for response to non-road emergency activities.

Major responsibilities of the Public Works Department during disaster events include: operation of the road system, traffic control systems, debris removal, maintenance of fleet vehicles and emergency generators, mobile radio system maintenance, structural evaluation of infrastructure, solid waste management and damage assessment including evaluation of hazardous buildings. The Public Works Department may provide support for heavy rescue operations and may play a key role in establishing multipurpose staging areas.

(4) Damage Assessment (Annex D). A Damage Assessment Director will be appointed for disaster events requiring a damage assessment process. The Lane County Assessor is designated as the manager of the Damage Assessment Annex and would normally be the person appointed as Damage Assessment Director. The purpose of this function is to ensure that personnel and procedures are available to provide preliminary estimates and descriptions on the extent of damage resulting from large-scale disasters. Personnel in this annex are responsible for posting buildings that are unsafe to occupy, condemning structures beyond repair, and evaluating street systems, bridges, and other infrastructure for use and safety.

(5) Debris Management (Annex E). The Public Works Director or designee will appoint a Debris Management Director to coordinate all phases of Debris Management. The Debris Management Director will report to the Public Works Branch Director. The Debris Management Director would normally be the County Waste Management Manager.

A coordinated effort will be necessary for the removal, collection, and disposal of debris generated from a large event. The goal will be to use existing solid waste, best practice strategies and methods to reduce, reuse, recycle, recover, and landfill as a final option. Initial debris assessment will determine if a disaster is of significance to request assistance from outside resources. Debris management staff will help establish priorities for the allocation of resources, collaborate with damage assessment team needs, physically remove debris, open transportation routes, and ensure compliance with Department of Environmental Quality (DEQ)/ Lane Regional Air Pollution Authority (LRAPA), Division of State Lands (DSL) and the Army Corps of Engineers (ACOE) regulations and requirements. If needed, debris management staff will also locate temporary storage sites for the collection and recovery of debris.

(6) Legal Services (Annex F). County Counsel will provide legal advice to the Policy Group of Lane County and to the Incident Commander during major emergencies

or disaster events. County Counsel will be responsible for drafting the necessary language for a disaster declaration to be signed by the County Commissioners; evaluate legal responsibility, liability issues and advise the Policy group; advise Policy Group and Incident Commander regarding: wage, price and rent controls, rationing of critical resources, establishing curfews, and using any publicly or privately owned resource with or without payment to the owner; advise County officials on possible liabilities arising from disaster operations, including the exercising of any or all of the above powers; prepare and/or recommend local legislation needed to implement emergency powers; advise Lane County officials and department heads about record-keeping requirements and other documentation necessary for exercising emergency powers; advise and recommend county ordinance or orders to reduce the effects of disaster; prepare sample documents, such as declaration of State of Emergency, for use; review any mutual aid agreements developed by departments; recommend necessary provisions of the Lane County Manual and Lane Code to support emergency response; review pertinent updates or changes to the County Emergency Operations Plan and report any legal or liability concerns to the responsible Plan or Annex Manager.

(7) Shelter and Mass Care (Annex G). The American Red Cross (ARC) will assume lead in establishing shelters and providing mass care needs. The Lane County Health and Human Services Department will coordinate and assist the ARC for Lane County needs. The purpose of this function is to establish plans, procedures, policy and guidelines for providing protective shelters, temporary lodging, emergency feeding, and clothing of persons forced to leave their homes due to emergency, disaster or precautionary evacuation.

(8) Health Services (Annex H). Lane County Department of Health and Human Services (H&HS) directs the measures needed to prevent the spread of disease and deliver emergency/crisis mental health services. Health and Human Services will coordinate public health, mental health, and medical services during emergency situations to reduce death and injury and to assist in damage assessment and restoration of essential health services within the disaster area.

(9) Care and Management of the Deceased (Annex I). The handling of fatalities in a mass casualty disaster is the jurisdiction of the medical examiner under the supervision of the District Attorney's Office. The medical examiner is responsible for the care and handling of individuals who are deceased due to the occurrence of a disaster including tagging of bodies, identification of deceased individuals, execution of the evidentiary process, transportation of bodies, notifying of next of kin and coordination with mortuary facilities.

(10) Communication Services (Annex J). Overall coordination of emergency communications will be exercised from the Sheriff's Office Emergency Operations Center (EOC), if activated. The communication needs of emergencies affecting a single jurisdiction will likely be managed by the affected jurisdiction's communications plan(s), with the County EOC serving as support. The County's Public Information Officer will coordinate with the Sheriff's Office to verify/correct and disseminate vital information to the media and public to ensure understandable and accurate messages.

The 24-hour Communications Center operated by the Lane County Sheriff's Office may be called upon to expand their operations during times of impending or real emergencies, warning situations, disasters, hazardous incidents and response and recovery operations. Some equipment is available to provide communications necessary for emergency operations.

To the extent possible, all communications systems used for normal operations will be utilized, if available, during emergency operations. In the event of a large-scale emergency or disaster it will be critical to quickly identify communication needs and to

deploy technical support personnel to develop alternative communications capabilities. Telephones, if available, will be considered the primary method of communication for administrative support. This may include the use of cell phones, E-mail systems, voice mail messages, and FAX. Two-way radio systems, including Amateur Radio, will be used in the direction and control of emergency operations when the use of telephones is not possible or convenient.

(11) Notification and Warning Services (Annex K). If time permits, the issuance of emergency public information will be with the concurrence of the Board of Commissioners and will be coordinated and disseminated by the County's Public Information Officer (PIO). In situations posing an immediate threat to life, emergency information may be issued by any public safety official serving as the Incident Commander. Such information shall be disseminated by the most effective method. Any official initiating a warning or providing emergency information to the public shall notify the County Warning Point (LCSO Dispatch) as soon as possible to facilitate further notification and action. Dissemination of warning or emergency information to the public, essential workers, and public officials may utilize any or all of the following systems: Emergency Alert System (EAS), Community Emergency Notification System (CENS), National Warning System (NAWAS), sirens and public address systems, door-to-door, and media.

(12) Public Information (Annex L). Lane County's Public Information Officer is activated during an emergency by the Lane County Sheriff's Office Incident Command, by the Public Health Office, or by request to assist with external agency emergencies as a member of the local Joint Information Center Public Information Officers Network (JIC PIO Network).

Emergency public information will work within an incident command structure, most often reporting to Lane County's incident command at the Emergency Operations Center.

The decision to activate all or portions of the Joint Information Center (JIC) will be made during consultation with Incident Command, Public Health Office, the Department of Health and Human Services, or when the demand for information is greater than the regular Public Information Office operations capacity. Should the demand and volume of information required exceed Lane County's regular Public Information Office's capacity, the Public Information Officer will establish a JIC with a phone bank for public non-emergency calls, media center and Public Information Officer (PIO) working room. In addition, the JIC will be opened and staffed if two or more agencies become involved in the emergency and based on the scope of the incident. Due regard will be given to the agency of initial or primary jurisdiction. The center may be moved or re-established when warranted.

Lane County's Public Information Officer (usually also Lead Public Information Officer) will be the designated spokesperson for the County during an emergency situation. To avoid confusion and misinformation, all contact with the news media will be limited to the Public Information Officer and JIC staff. Requests for information during the emergency situation shall be referred to the Public Information Officer and JIC.

(13) Volunteer Services (Annex M). Volunteer agencies providing services are generally coordinated by the American Red Cross and in most cases assigned to shelter and mass care functions or public health services. A government liaison specialist from the American Red Cross may be assigned to the Lane County EOC during major disasters to help coordinate volunteer organization efforts.

Lane County Emergency Management may utilize volunteer resources to help mitigate the impacts of disaster events. Volunteers may be solicited to perform tasks such as filling sand bags, perform debris recycling, etc. Volunteers may be part of an

organized volunteer service agency such as 4-wheel drive clubs, or other organizations such as Amateur Radio Emergency Services (ARES) or human service organizations such as Red Cross or Salvation Army. Volunteers from an organized Community Emergency Response Team (CERT) may be utilized to assist neighbors until response teams arrive.

(14) Evacuation (Annex N). All evacuation actions within Lane County will be managed using the Incident Command System (ICS). The Lane County Sheriff is the overall authority for evacuation efforts. Overall coordination of major evacuation efforts in Lane County will be from the Lane County EOC if activated. Evacuation efforts will be carried out in conjunction with the fire jurisdiction(s) from which the evacuation occurs.

(15) Strategic National Stockpile (Annex O). Lane County Department of Health and Human Services works to prevent the spread of disease and support the delivery of medical services. In the event of a threatened or actual public health disaster or emergency in which local resources such as pharmaceuticals, vaccines, medical supplies, equipment, and other items are taxed, Health and Human services can initiate a request of the Strategic National Stockpile which can be requested by the Oregon State Public Health Officer, Oregon Governor, or other designee.

(16) Special Needs Population (Annex P). Lane County Department of Health and Human Services (H&HS) coordinates emergency communication and response for visitors and citizens of Lane County with Special Needs. These needs may include but are not limited to persons who are physically, hearing or visually impaired, developmentally disabled, mentally impaired, homeless, frail seniors, tourists, and non-English speakers. *(Revised by Order 98-4-1-11; Effective 4.1.98; 07-10-24-7, 10.24.07)*

#### **54.040 Hazard Analysis.**

The events defined in this section are considered to pose the greatest hazard to Lane County. This list, however, should not be considered exclusive.

Snow/Ice Storm. This type of hazard is an atmospheric disturbance characterized by a strong wind and usually accompanied by rain, snow, sleet, hail, and often thunder or lightning. Also characteristic of this hazard is any heavy fall of snow, rain, or hail. Snow storms or blizzards, which are snow storms accompanied by high wind and/or drifting snow, occur occasionally in the area.

Hail storms occur when freezing water in thunderstorm type clouds accumulates in layers around an icy core. Wind added to hail can batter crops, structures and transportation systems.

An ice storm occurs when rain falls out of warm moist upper layer of atmosphere into a below freezing, drier layer near the ground. The rain freezes on contact with the cold ground and accumulates on exposed surfaces. If this is accompanied by wind, damage can occur to trees and utility wires.

Historic snow and ice storms in Lane County have caused power outages, various accidents, road closures and damage to buildings. It is estimated that Lane County will have another major snow and ice storm in the next 10 to 35 years.

Lane County has rated its own risk for snow/ice storm as high for Central Lane County and low for Coastal Lane County.

Flood. This hazard generally involves a rise in rivers or creeks resulting from heavy rain or rapid melting of the annual snow pack. Major flooding could also result from failure of a man-made structure constructed to restrict the flow of water such as a dam or levee. Lane County has numerous rivers and tributaries that could be subject to flooding and cause a threat to life, property and the environment.

Although there are nine dams inside the county and two in Linn County that help mitigate the flood hazard, flood control efforts themselves can cause hazardous conditions. Flow releases are sometimes necessary due to heavy rains and rising pool levels in lakes and reservoirs but can result in localized flooding.

Lane County has rated its own risk for flood as high for both Central Lane County and Coastal Lane County.

Windstorm. This type of hazard is an atmospheric disturbance characterized by a strong wind and usually accompanied by rain, snow, sleet, hail and often thunder and lightning. The National Weather Service classifies wind from 38 to 55 MPH as gale force winds; 56 to 74 MPH as storm force winds and any winds over 75 MPH as hurricane force winds. Destructive winds like those described normally occur between October and March.

A tornado is violently rotating column of air, pendant from a cumuliform cloud or underneath a cumuliform cloud, and often (but not always) visible as a funnel cloud.

Tornados are the most violent weather phenomena known. Their funnel shaped clouds rotating at velocities of up to 300 miles per hour generally affect areas of 1/4 to 3/4 of a mile wide and seldom more than 16 miles long. Tornados are produced by strong thunderstorms. Such thunderstorms can also produce large damaging hail, heavy amounts of rain, and strong damaging winds.

Lane County has rated its own risk for windstorm as high in both Central Lane County and Coastal Lane County.

Wildfire. A wildfire is a fire that burns uncontrollably in a natural setting (e.g., a forest, or grassland).

Lane County has rated its own risk for wildfire as moderate in Central Lane County and low in Coastal Lane County.

Domestic Terrorism. This hazard includes riots, protests, strikes, demonstrations or acts of terrorism which may result in taking of hostages, damage to property, looting, or sabotage and extortion. Such an event might include arson, bomb threats, and other unlawful activities identified above.

Lane County is at risk due to the Federal Building / Courthouse, University of Oregon and all levels of government in close proximity to each other. Increased protests, demonstrations and anarchist activity over the past several years in Lane County indicate a higher probability of future events occurring. Coastal Lane County has a recurring past of riots associated with the Rhododendron Festival.

Lane County has rated its own risk for domestic terrorism as moderate in Central Lane County as well as Coastal Lane County.

Landslides. The term landslide refers to the downward movement of masses of rock and soil. Landslides in this area are for the most part masses of soil ranging in volume from just a few feet, to many yards. The rate of travel of a slide can range from a few inches per month to many feet per second, depending on slope, material and water content. Landslides can be initiated by storms, earthquakes, fires, erosion, volcanic eruptions and by human modification of the land.

Lane County has rated its own risk for landslides as moderate in both Central Lane County and Coastal Lane County.

Hazardous Material. This type of hazard includes the production, use, storage, transportation and disposal of hazardous substance and wastes that place the public, property and environment at significant risk. Illegal drug labs and drug dumping present yet another concern. Recent history shows an increased threat from terrorists in connection with hazardous materials.

Hazardous substances are any materials that pose a threat to human health and/or the environment, and any substance designated by the Environmental Protection Agency

(EPA) to be reported if a designated quantity of the substance is spilled into the waters of the United States or is otherwise released into the environment.

Hazardous wastes are by-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed, that possess at least one of five characteristics (flammable, explosive, corrosive, toxic, or radioactive), or that appear on the EPA lists.

A hazardous chemical is any hazardous material requiring an MSDS (Material Safety Data Sheet) under OSHA's Hazard Communication Standard. Such substances are capable of producing fires and explosions or adverse health effects such as cancer, burns, or dermatitis.

Incidents involving the release of hazardous materials may occur during handling at industrial facilities or during the transportation of such materials by rail or highway.

Lane County has rated its own risk for hazardous materials incidents as moderate in both Central Lane County and Coastal Lane County.

Earthquake – Tsunami. The greatest concern to Lane County is the Cascadia Subduction Zone off the Pacific Coast. This is where the Juan de Fuca plate meets the North American plate. This meeting has created an 800 mile long earthquake fault on the ocean floor that stretches from the Brooks Peninsula on Vancouver Island to Cape Mendocino in northern California. Earthquakes generated along this fault have far more widespread effects than other types of quakes in the region. Also of concern is the potential for a tsunami as a result of a quake along this subduction zone.

Earthquake-induced movement of the ocean floor most often generates tsunamis. If a major earthquake or landslide occurs close to shore, the first wave in a series could reach the beach in a few minutes, even before a warning is issued. Areas are at greater risk if they are less than 25 feet above sea level and within a mile of the shoreline. Drowning is the most common cause of death associated with a tsunami. Tsunami waves and the receding water are very destructive to structures in the run-up zone. Other hazards include flooding, contamination of drinking water, and fire from gas lines or ruptured tanks.

Lane County has rated its own risk for earthquake-tsunami as moderate in Central Lane County and high in Coastal Lane County.

Volcano. In the Pacific Northwest there is a 1,000-mile-long chain of volcanoes, the Cascade Range, which extends from northern California to southern British Columbia. Seven of those volcanoes have erupted in the past 230 years. These include Mount Baker, Glacier Peak, Mount Rainier, Mount St. Helens, Mount Hood, Mount Shasta, and Lassen Peak. These and many others could erupt again.

The Central Cascades extend from Mount Jefferson in the north to Diamond Peak in the south. The most active volcanoes in this stretch have been Three Sisters and Newberry. The last eruptive period in the Three Sisters area was 1000-2000 years ago. The most recent eruption (Big Obsidian Flow) in Newberry was 1300 years ago. Recently ground uplift (bulge) and anomalous water chemistry have been recorded west of Three Sisters. Because there are no written chronicles of past major eruptions, most of our information about the Central Cascades past comes from geologic study of deposits produced during those eruptions.

According to a volcano hazards map developed by the USGS, the McKenzie River valley is a primary lahar hazard zone - almost all the way to Springfield. Besides impacts from a lahar, ash fall from easterly winds during a Central Cascades event could certainly pose a hazard for Lane County.

Lane County has rated its own risk for volcano hazard as low in Central Lane County. Lane County does not consider Coastal Lane County at risk from a volcano hazard. *(Revised by Order 94-2-15-7; Effective 2.15.94; 07-10-24-7, 10.24.07)*