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SA E – Animals in Disaster

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SA E Tasked Agencies	
Primary Agencies	Transportation and Development
Supporting Agencies	Emergency Management Health, Housing and Human Services (H3S) Public and Government Affairs American Red Cross

1 Purpose and Scope

The 2005 Gulf Coast hurricanes and other disasters in recent years have clearly demonstrated that emergency planning must include provisions for household pets, service animals, and, in some cases, farm animals and livestock. This Support Annex (SA) outlines tasks and responsibilities for protecting animals in Clackamas County during emergencies.

2 Policies and Authorities

The 2006 Pets Evacuation and Transportation Standards (PETS) Act requires state and local governments to incorporate pets and service animals in disaster planning.

Oregon Revised Statutes 401 requires Oregon Emergency Management and the Oregon Department of Agriculture to develop emergency operations plans that provide for companion and service animals and livestock.

3 Situation and Assumptions

- Animals are vulnerable to many of the same risks and hazards as people.
- Owners have primary responsibility for the safety and welfare of their animals.
- The success of an emergency plan for animals will depend largely on the preparations each animal owner takes in advance of an emergency.
- Abandoned animals may pose a risk to rescuers and the public.
- Animals are more likely to contract and transmit diseases during disasters and emergencies.
- Animal food supplies may become contaminated, destroyed, or scarce during an emergency.
- Large numbers and species of animals could become contaminated during a hazardous materials or chemical, biological, radiological, nuclear, or explosive (CBRNE) incident.

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- Evacuation plans need to include transportation and shelter options for companion animals. Many individuals may refuse to evacuate if they are unable to take their animals with them, and no one should have to choose between evacuating to safety or remaining with their pets in harm's way.
- Service animals are the only animals accepted at American Red Cross shelters.
- Livestock animals like cattle, horses, sheep, goats, pigs, and poultry may need to be evacuated, sheltered, and cared for in an emergency.
- County Dog Services staff will collaborate extensively with animal welfare organizations, veterinarians, pet stores, breeders, emergency management officials, city and state agencies, and volunteer groups to develop community-specific plans.

4 Roles and Responsibilities

All agencies tasked under this annex will develop and maintain written internal operating plans and implementing procedures and will train employees in their use.

4.1 Primary Agencies

4.1.1 Animal Owners

- Have primary responsibility for the safety and welfare of their animals during emergencies.

4.1.2 Dog Services Division

- Respond to emergency responder requests for assistance in dealing with injured, stray, or abandoned animals.
- Ensure the safety of animals in the shelter, including evacuation.
- Establish animal shelters, preferably in close proximity to human shelters.
- Implement animal rescue, transport, intake, care and handling, visitation, and security procedures, including foster care systems.
- Assist fire agencies in animal decontamination operations.
- Implement emergency quarantine and impounding procedures.
- Coordinate with Human Services for volunteer recruitment and training.

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- Collaborate with the Public Information Officer/Joint Information Center to develop and disseminate animal health information.
- Coordinate with State agencies for disposition of exposed/contaminated animals and other long-term recovery actions.

4.2 Supporting Agencies**4.2.1 Clackamas County Emergency Management**

- Assist in incident management and multi-jurisdictional coordination.
- Activate the Emergency Operations Center (EOC).
- Facilitate the Emergency Declaration process.
- Coordinate with city, regional, and State counterparts.

4.2.2 Health, Housing and Human Services

- Assist access and functional needs populations in emergency planning for service animals.
- Coordinate behavioral health services for individuals coping with animal injury or loss.
- Coordinate with appropriate State agencies regarding health monitoring, tracking and reporting animal disease that has human implications, and animal waste and disposal.
- Coordinate volunteer registration and referral.

4.3 Volunteer Agencies

The American Red Cross provides and manages shelter and mass care operations but, because of safety and health regulations, allows only certified service animals in its shelters. The American Red Cross will coordinate with EOC/Dog Services staff to activate animal shelters in close proximity to American Red Cross shelters to accommodate pet owner needs.

The Humane Society will assist in rescuing animals and coordinating shelter for household pets and service animals.

The Oregon Veterinary Medical Association will assist in locating and coordinating veterinary support during animal emergencies.

5 Concept of Operations

5.1 General

Dog Services staff plans and coordinates animal evacuation, sheltering, and care services in an emergency, focusing on three areas: public education, planning, and emergency response.

5.2 Public Education

Owners are responsible for the safety and welfare of their animals, including emergency plans for evacuation and shelter.

Owners should assemble go-kits of emergency supplies for their animals that include food, water, bedding, toys, leashes, carriers, medications, veterinary contact information, microchip numbers, and current pictures of all pets, preferably one of which includes the pets and owner together.

Farmers may need to relocate animals to higher areas or open pasture.

5.3 Planning

5.3.1 Estimated Animal Populations in Clackamas County

- Companion animals:
 - 80,000 dogs
 - 87,000 cats
 - 20,000 other pets (e.g., birds and rodents)
- 9,223 horses and ponies
- 25,000 cattle and calves
- 23,000 other animals (e.g., bee colonies, goats, and sheep)
- Fowl, including 1,741,942 broilers
- Citizens have permits for 10 exotic animals, but the number of non-permitted exotics is believed to be much higher

5.3.2 Planning Model

Dog Services has developed an animal emergency planning model to forecast shelter capacity, equipment, supplies, and staff required during emergencies.

5.3.3 Community Collaboration

Dog Services is working with organizations throughout the County to assess community animal needs and resources, including:

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- Facilities that house or serve animals, including those that may be especially at risk in emergencies.
- Assisted living and senior citizen centers that may have many residents with pets and limited resources for moving them.
- Resource availability, including vehicles, cages, and equipment for moving and sheltering all types of animals.
- Facilities that may provide potential animal staging/shelter near American Red Cross shelters or combination people/animal shelters.

5.4 Emergency Response**5.4.1 Setting the Stage**

- In slowly developing incidents that allow for advance warning, most households with personal transportation will evacuate safely with their animals. Dog Services and EOC staff will coordinate transportation options for families with pets that do not have personal transportation.
- Emergencies that occur with no warning while owners are away from home and cannot return to their animals may cause difficulty for rescue workers. Even normally docile animals may respond aggressively in emergencies, especially when separated from their owners. Rescue workers will request Dog Services' assistance when confronting potentially aggressive animals.
- Farm and livestock animals represent a large financial investment for their owners in rural Clackamas County and pose a serious challenge if evacuation is required. Livestock left behind risk becoming ill or injured and pose dangers to rescuers. Animal waste products or carcasses may cause public health problems if allowed to accumulate or contaminate the water supply.
- Wildlife and stray or feral cats and dogs are likely to become agitated and aggressive if their normal habitat is disrupted or destroyed and they are unable to find adequate food, water and shelter.
- Zoonotic diseases—those spread from animals to people—and illnesses spread by contamination from animal carcasses are serious public health risks.
- Exotic animals include wild, non-native animals that require special containment for their own safety and the safety of nearby people and animals. State statute requires that exotic animals be registered with the Department of Agriculture. Ten exotic animals are registered in Clackamas County, most of them various species of wild cats. It is

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likely that additional exotic animals are not registered and may pose serious hazards for rescue workers if not properly contained.

- Some dangerous animals, e.g. alligators and crocodiles, are not classified as exotic animals yet may still pose serious risks to rescuers and the public.

5.4.2 During an Emergency

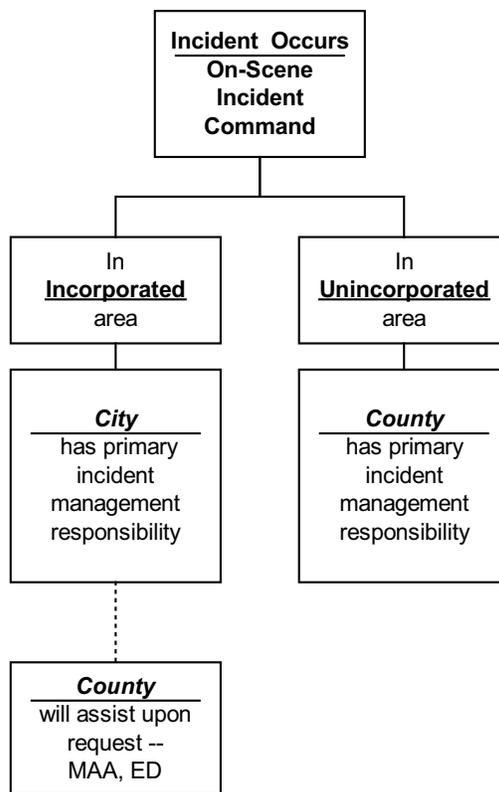
- Dog Services will give first priority to ensuring the safety and welfare of animals in County shelters, evacuating them if needed.
- The next priority will be to respond to requests for assistance from emergency responders in the field, capturing and caring for sick, injured, or displaced animals.
- Dog Services will coordinate overall animal emergency response activities with cities and other stakeholders throughout the County through the EOC.

6 Direction and Control**6.1 General**

If an incident occurs in an incorporated area, the city in which it occurs has jurisdictional authority and primary incident management responsibility. If two or more cities are impacted, the cities share responsibility for incident management and the safety and well-being of their citizens.

The County has jurisdictional authority and primary incident management responsibility for incidents that occur in the unincorporated area. If the incident impacts both the unincorporated and an incorporated area, the County and impacted cities share responsibility.

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All jurisdictions with incident management responsibility are likely to activate their EOCs and implement their Emergency Operations Plans in a major incident. EOC staffs will coordinate resources in support of field activities, share incident information, conduct multi-agency planning, and operate the Joint Information System. All participating agencies/jurisdictions will collaborate to establish and maintain a common operating picture.

6.2 Cities

Cities should include provisions for household pets and service animals in their emergency plans, especially during evacuation. Cities should also urge citizens to include their animals in individual and family emergency preparedness planning. Cities are asked to coordinate animal emergency response and recovery activities with Clackamas County Emergency Management (CCEM), EOC staff, and Dog Services.

6.3 County

Dog Services and other responders manage most animal control and rescue operations routinely in the field. If an incident potentially involves large numbers of people and animals, On-Scene Command will notify Emergency Management and Dog Services to assist in coordinating animal response activities. Dog Services personnel serving on the EOC staff will coordinate with regional and State partners for resource assistance.

6.4 Regional

Animal control organizations in the region are working together to compile a list of pet-friendly hotels and motels, evacuation equipment and supplies, and other resources that can be used in an emergency.

Clackamas County participates in the Inter-County Omnibus Mutual Aid Agreement that provides a framework for participating counties to request mutual aid from each other in emergencies. Emergency assistance may include equipment, supplies, and personnel, or the direct provision of services. A copy of the agreement and current participants is available in the EOC library.

The Intra-State Mutual Assistance Compact provides for non-reimbursable assistance among local governments. To receive reimbursement for resource assistance provided under this statute, participants must agree in writing to a formal reimbursement request before resources are dispatched.

6.5 State and Federal Assistance

The Oregon Department of Agriculture and OEM share responsibility for maintaining a State animal disaster response plan that addresses animal evacuation, shelter, and care during non-disease emergencies. The plan describes the capabilities of State and local government agencies and volunteer organizations to address the needs of companion animals, livestock, poultry, and captive wildlife during disasters. A copy of the plan is available in the EOC library.

The Oregon Department of Agriculture works to control and eradicate animal diseases, including those transmissible to humans. This department also develops and maintains the Oregon Animal Disease Emergency Management Plan. The Animal Health and Identification Division:

- Assists local governments in developing local animal response plans.
- Identifies resource providers.
- Serves as the lead support agency for evacuation, shelter, and care of companion animals, service animals, and livestock.
- Assists in providing food, water, shelter and veterinary care to affected animals.
- Activates the Oregon Animal Disease Emergency Management Plan. (A copy of this plan is available in the EOC library.)

OEM coordinates State agencies with roles in pet, service animal, and livestock evacuation, shelter, and care. OEM activates the State Emergency Coordination Center, serves as point of contact for local emergency management agencies, and coordinates Federal support.

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The Oregon Department of Fish and Wildlife assists with the capture and relocation of displaced wildlife, care of diseased or injured wildlife, and euthanasia and disposal of wildlife.

The Oregon Department of Human Services assists in providing grief counseling support for animal owners experiencing stress and/or loss and monitors/advises regarding zoonotic diseases.

The Oregon Department of Transportation assists in moving State resources during an emergency, with traffic control and movement, and may provide operators and equipment to assist in animal disposal.

The Oregon State University College of Veterinary Medicine provides veterinary support and expertise, and diagnostic support services. The Cooperative Extension Service assists with information development and local dissemination.

7 Emergency Support Function Development and Maintenance

The Director of the Department of Transportation and Development will ensure that this annex and supporting plans are reviewed and revised every two years or when changes occur, such as lessons learned from exercises or actual events. Emergency Management staff is available to assist.

8 Supporting Plans and Procedures

The following plans and procedures are currently in place:

- Clackamas County Emergency Operations Plan
 - ESF 1 – Evacuation
 - ESF 6 – Mass Care, Emergency Assistance, Housing, and Human Services
 - ESF 11 – Agriculture and Natural Resources
- EOC Library
 - Regional Animals in Disaster Plan
 - Oregon Animal Emergency Response Plan
 - Oregon Animal Disease Emergency Response Plan
- State of Oregon Emergency Operations Plan, ESF 11 – Agriculture and Natural Resources
- National Response Framework, ESF 11 – Agriculture and Natural Resources

9 Appendices

None at this time.

Incident Annexes

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IA 1 – Weather Emergencies

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IA 1. Weather Emergencies

IA 1 Tasked Agencies	
Primary Agencies	Emergency Management Fire Defense Board Sheriff's Office Transportation and Development
Supporting Agencies	Health, Housing and Human Services Public and Government Relations National Weather Service Utilities (PGE)

1 Purpose and Scope

Clackamas County is vulnerable to a variety of weather emergencies that can cause significant damage and hardship. This annex outlines the tasks and responsibilities required to respond effectively to these incidents and the damage they can cause.

2 Policies and Authorities

None at this time.

3 Situation and Assumptions

3.1 Situation

A major weather emergency is a County emergency requiring notification of Clackamas County Emergency Management (CCEM), implementation of the Emergency Operations Plan (EOP), and, possibly, activation of the Emergency Operations Center (EOC). All weather incidents are managed according to the National Incident Management System (NIMS)/Incident Command System (ICS).

3.2 Assumptions

- Weather conditions that may impact Clackamas County include winter storms/avalanche, floods, windstorms/tornadoes, extreme heat, and drought.
- While drought is a serious issue that may profoundly impact agriculture, fish, and wildlife and increase the risk of fire, it rarely creates a situation requiring immediate emergency response and activation of the EOC.
- Winter storms/avalanche, floods, and windstorms/tornadoes may require significant emergency operations to protect life and property and to move residents from harm's way.

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- Periods of extreme heat can be hazardous to citizens who do not have access to adequate transportation resources to protect life and property and to move residents from harm's way.
- All agencies tasked under this annex will develop and maintain internal operating plans and implementing checklists consistent with the EOP and appendices.

4 Roles and Responsibilities

The roles and responsibilities for each department in support of emergency services will vary depending on the type of resource, the length of the warning period, and the duration of the incident.

4.1 Primary Agency

4.1.1 Emergency Management

- Implement the EOP.
- Activate the Situation Assessment Team.
- Activate the EOC.
- Serve in Unified Command.
- Advise the County Administrator and Board of County Commissioners.
- Facilitate the Emergency Declaration process.
- Serve as EOC Manager.
- Coordinate with city, regional, and State counterparts.
- Request Clackamas Amateur Radio Emergency Services (CARES) activation.
- Monitor the situation and disseminate information.

4.1.2 Fire Defense Board

- Coordinate fire agency response.
- May serve in Unified Command.
- Provide staff for EOC operations.
- Provide life safety/rescue operations.

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- Coordinate emergency medical services and care for injured individuals.
- Assist in short-duration traffic control.
- Assist in warning and evacuation operations.
- Conduct welfare checks.
- Conduct Search and Rescue operations, in collaboration with law enforcement.
- Report damage, road, and weather conditions to the EOC.

4.1.3 Sheriff's Office

- Coordinate law enforcement response.
- May serve in Unified Command.
- Provide staff for EOC operations.
- Conduct search and rescue operations.
- Provide traffic and crowd control.
- Coordinate warning and evacuation.
- Provide security.
- Conduct welfare checks.
- Report damage, road and weather conditions to the EOC.

4.1.4 Transportation and Development

- Coordinate public works response.
- May serve in Unified Command.
- Provide staff for EOC operations.
- Coordinate road and bridge inspection and assessment.
- Assist in traffic and crowd control by providing signs, barriers, equipment, and personnel.
- Provide heavy equipment.
- Report damage, road, and weather conditions to the EOC.

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- Assess roads likely to be affected, develop alternate traffic routes, and determine barricade and signage needs.
- Assess emergency transportation routes (ETRs) and determine priorities for maintenance and debris removal.
- Coordinate debris removal from storm drains, roadways, culverts, public rights-of-way, and areas potentially impacting public safety or health.
- Coordinate with utility providers to protect/restore services.

4.2 Supporting Agencies**4.2.1 Health, Housing and Human Services**

- Coordinate health and human services response.
- Serve in Unified Command if significant health response is involved.
- Provide staff to support EOC operations.
- Assist people with access and functional needs.
- Identify critical facilities in at-risk areas.
- Assist in coordinating volunteer recruitment and deployment.
- Evaluate impact on public health of contaminated potable water sources, disruption of sanitary services, and other environmental concerns.
- Provide public health information to Unified Command/Public Information Officer (PIO) for dissemination to the public.
- Work with the American Red Cross in opening and operating shelters for evacuated persons and services for people with access and functional needs.

4.2.2 Public and Governmental Relations

- Provide staff for the PIO and Joint Information Centers.
- Develop and coordinate a Joint Information System.
- Work with local, State, regional, and Federal jurisdictions.
- Gather, prepare, and obtain approval for all communications sent to media, jurisdictions, and employees.

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- Ensure that updated information is provided to the public regarding current weather conditions and forecasts, incident status and response, utility status, routes and detours, traffic conditions, transportation options for those who need assistance, shelter locations and updates, systems for locating family, friends and pets, and actions to be taken to safeguard lives and property.

4.3 Volunteer Agencies**4.3.1 American Red Cross**

The American Red Cross provides and manages shelter and mass care operations for citizens who are victims of disaster and feeding and support services for emergency responders. The American Red Cross will:

- Activate and operate emergency shelters for displaced citizens as requested by the EOC.
- Provide feeding, basic health and behavioral health services, and welfare assistance.
- Provide an American Red Cross liaison to the EOC.

4.3.2 Clackamas Amateur Radio Emergency Services

- Request that HAM operators report actual or potential weather hazards and conditions to the EOC.
- Assist with Countywide damage reporting.
- Establish an incident-specific net operations plan.
- Provide redundant communications.

5 Concept of Operations**5.1 General**

Effective response to weather emergencies requires:

- Careful monitoring of weather conditions and forecasts.
- Ongoing assessment of the weather's impact on the County and determination of the areas at greatest risk.
- Close cooperation with cities, special districts, adjoining jurisdictions and private utility providers.
- Regular contact with the National Weather Service (NWS) and other weather-related monitoring agencies.

IA 1. Weather Emergencies**5.2 Types of Incidents****5.2.1 Winter Storms**

Winter storms are among the most common weather incidents impacting the County and often involve heavy accumulations of snow and ice that make travel dangerous or impossible, disrupt transportation of goods and services, damage trees and power lines, and cause widespread power outages. Dangerous road conditions make emergency response more difficult and complicate the evacuation of people from areas at risk and the delivery of personnel, equipment and supplies to damaged areas. Avalanche risk is generally confined to the higher elevations surrounding Mount Hood.

5.2.2 Flooding

Flooding of rivers, streams, and tributaries may occur during periods of heavy rain and/or rapid snow melt (or as a result of a dam failure). The rapid rise of water in a number of rivers and streams would present severe risks to life and property, and any impending flood may require the evacuation of significant numbers of people and animals. Landslides are an associated problem that may occur as a result of flooding along the riverbeds.

5.2.3 Windstorms and Tornadoes

Windstorms and tornadoes may occur suddenly, leaving little time for people to react and move to safety. Even with ample warning that a windstorm or tornado is likely, its path may be difficult to predict. Damage from these incidents may be extensive and severe, or confined to a narrow path of destruction, but they pose serious risks to life, infrastructure, and property whenever weather conditions make them likely.

5.2.4 Excessive Heat

Periods of excessive heat occur periodically in the summer season and may require activation of cooling shelters to assist citizens

5.3 Emergency Actions

In slowly developing incidents for which there is advance warning, CCEM will normally activate the EOC to monitor pending hazards associated with the weather phenomena. If appropriate, CCEM will convene the Situation Assessment Team to gauge the potential risk and determine the appropriate actions the County should take in anticipation of the incident. Depending on the circumstances, the EOC ICS Planning Section may be activated to monitor the developing situation, identify areas likely to be at greatest risk, and develop contingency plans.

Pre-incident operations may include pre-positioning supplies and equipment, identifying sites for sandbag distribution and staging areas, and rotating shifts of personnel to assess rising water levels, ice and snow accumulations, road and bridge conditions, etc. Field personnel will continually report current conditions

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to their dispatch centers and/or the EOC as they provide services throughout the county.

The Department of Transportation and Development, Clackamas County Sheriff, and the Fire Defense Board serve as the primary agencies coordinating response to a weather incident. Primary agencies will work within the PIO structure to coordinate information to the public regarding weather conditions and the safety measures the public should take throughout the incident.

During periods of excessive heat, the Department of Health, Housing, and Human Services may identify vulnerable populations and/or facilities, activate a call-in hotline for people to report their situation and needs, and coordinate with the American Red Cross to establish cooling shelters.

Volunteers may be used to assist in sandbag operations or help with evacuations. Volunteer weather spotters and amateur radio operators may also assist in situation reporting.

6 Direction and Control

6.1 County

Depending on the numbers of people affected, the area and extent of the damages, and the response operations required, the incident initially may be managed from a field Incident Command Post or from Department Operations Centers. As the scope of the damage and response increase, and/or more agencies become involved, overall management of the incident will transfer to the EOC.

When the Incident/Unified Command determines that incident response will require resources beyond those available day-to-day and through mutual aid, requests should be coordinated through the EOC. If time does not permit pre-coordination, the EOC should be notified as soon as possible. If needed resources are not available, the County will request State assistance through an Emergency Declaration.

6.2 Cities

Cities have primary responsibility for the safety and well-being of their citizens and for resource allocation and emergency operations within their jurisdictions. Cities are encouraged to develop EOPs and to work closely with CCEM to integrate preparedness, response, and recovery activities. An intergovernmental mutual aid agreement between the County and cities is available to all jurisdictions that choose to participate. This agreement establishes procedures for requesting and providing mutual aid resources in an emergency.

Cities may request County assistance through mutual aid or through an Emergency Declaration. All city Emergency Declarations need to be submitted to the County for forwarding to the State, as necessary.

IA 1. Weather Emergencies**6.3 Special Districts**

County officials collaborate with special districts in coordinating emergency preparedness, response, and recovery operations. An intergovernmental mutual aid agreement between the County and special districts is available to all jurisdictions that choose to participate. This agreement establishes procedures for requesting and providing mutual aid resources in an emergency.

6.4 Regional

The Regional ETRs receive priority damage assessment, maintenance, and repair to ensure that these major transportation corridors are available to move people to safety and to move personnel and equipment for response operations. (An ETR map is available in the EOC Library.)

Clackamas County is a participant in the Inter-County Omnibus Mutual Aid Agreement that provides a framework for counties to request mutual aid from each other in emergencies, saving time and minimizing confusion during an incident.

6.5 State and Federal Assistance

OEM disseminates information on potentially dangerous weather conditions through the Oregon Emergency Response System (OERS).

The NWS is responsible for alerting public agencies and the general public of potentially dangerous conditions and impending emergencies. The NWS will issue alerts, watches, and warnings, as appropriate, when rainfall and/or snow melt may cause rivers to overflow their banks, winter storms are approaching, or windstorms/tornadoes are likely. The NWS forecast for the Portland area may be found at <http://www.wrh.noaa.gov/pqr/>

If incident response requires resources beyond those available to the County on a day-to-day basis and through mutual aid, Incident Command will request additional resources through an Emergency Declaration. EOC staff will forward the declaration to OEM for submission to the governor. OEM coordinates State resources and response and will seek a State declaration if necessary.

7 Annex Development and Maintenance

The Director of CCEM, the Fire Defense Board Chief, the Sheriff, and the Director of the Department of Transportation and Development are responsible for ensuring that this annex and supporting plans are updated at least annually, after every incident or exercise to which it applies, or as changes occur. CCEM is available to assist as requested.

8 Supporting Plans and Procedures

The following plans and procedures are currently in place:

- Clackamas County Support Annex 1 - Evacuation

9 Appendices

None at this time.

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IA 2 – Geologic Emergencies

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IA 2. Geologic Emergencies

IA 2 Tasked Agencies	
Primary Agencies	Transportation and Development Fire Defense Board Human Services Sheriff's Office
Supporting Agencies	Emergency Management Public and Government Relations

1 Purpose and Scope

This appendix addresses hazards and impacts related to earthquake, landslide, volcano eruption, and subsidence.

2 Policies and Authorities

- None at this time.

3 Situation and Assumptions

3.1 Earthquake

The Cascadia Subduction Zone lies just off the Oregon coast. This zone, where the Pacific plate is being submerged beneath the North American plate, is part of a larger subduction system that includes the seismically active, and extremely hazardous, San Andreas Fault and Alaskan earthquake zones. Clackamas County is well within the impact area for a major subduction earthquake occurring along the Cascadia Subduction Zone.

Earthquake hazard is created by tectonic movement within the earth's crust. This movement generates regional and localized ground shaking and/or soil liquefaction. After an initial seismic event, tremors or aftershocks can occur for an extended period of time, resulting in continuing structural damage. There are several known fault lines throughout the County, with further geologic analyses ongoing. An earthquake measuring 5.6 occurred in March 1993 and caused damage throughout the County, especially in the Molalla area.

Recent studies indicate that the Pacific Northwest could be subject to subduction earthquakes ranging from magnitude 8.5 up to magnitude 9.1. Additional fault zones throughout the County and region may produce localized crustal earthquakes of up to 6.0. A local earthquake of M 6.0 or a regional M 9 earthquake is likely to cause substantial structural damage to bridges, buildings, utilities, and communications systems, as well as the following impacts to infrastructure and the environment:

- Floods and landslides.
- Fires, explosions, and hazardous materials incidents.

IA 2. Geologic Emergencies

- Disruption of vital services such as water, sewer, power, gas, and transportation routes.
- Disruption of emergency response systems and services.

Actual earthquake damage can vary significantly, depending on the nature and severity of the event, localized soils, and structural vulnerability. Most injuries result from flying/falling building contents and debris.

Seismic vulnerability assessments have highlighted the need for seismic retrofit of critical facilities. As a result, the County has recently completed several structural and non-structural seismic upgrades in key facilities and is identifying additional areas for upgrades.

3.2 Landslide/Debris Flow

This hazard may include the down-slope movement of rock, soil, or other debris or the opening of sinkholes. These hazards are often associated with other incidents such as floods, earthquakes, or volcanic eruptions. Landslides occur frequently, often fueled by heavy rainfall combined with the moderate to high relief characteristics of the County's riverbeds.

Through the Natural Hazard Mitigation Plan process, the County has mapped landslide-prone areas and has developed and implemented mitigation measures where feasible.

3.3 Volcano

The last known eruptions of Mount Hood, located on Clackamas County's eastern border, occurred in the middle of the 19th century. Such recent eruptions, as well as the thermal activity that continues to be present, suggest that molten rock is still within or beneath Mount Hood. Risks associated with a volcanic eruption include pyroclastic flows (incendiary avalanches) and lahars (mud flows), river flooding, destruction of property and woodlands, risk to the Bull Run watershed, and volcanic ash fall. Heavy ash fall in Clackamas County can cause health problems for individuals with certain medical conditions, create havoc with transportation, and pose a significant risk to the public.

Clackamas County has joined with regional partners and State and Federal agencies to develop a Mount Hood Coordination Plan that applies many of the lessons learned from the eruption of nearby Mount St. Helens. This plan identifies agency/jurisdiction responsibilities and establishes procedures for timely and accurate dissemination of warnings and public information.

4 Roles and Responsibilities

4.1 Primary Agencies

4.1.1 Fire Defense Board

- Coordinate fire agency response.
- Serve in Unified Command.
- Provide staff for Emergency Operations Center (EOC) operations.
- Provide life safety/rescue operations.
- Assist in warning and evacuation operations.
- Conduct welfare checks for employees.
- Report damage, road and weather conditions to the EOC.

4.1.2 Sheriff's Office

- Coordinate law enforcement response.
- Serve in Unified Command.
- Provide staff to support EOC operations.
- Conduct search and rescue operations.
- Coordinate warning and evacuation.
- Provide security.
- Report damage, and road and weather conditions, to the EOC,

4.1.3 Transportation and Development

- Coordinate public works response.
- Serve in Unified Command.
- Provide staff for EOC operations.
- Coordinate road and bridge inspection and assessment.
- Assist in traffic and crowd control by providing signs, barriers, equipment, and personnel.
- Provide heavy equipment.
- Report damage, and road and weather conditions, to the EOC.

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- Assess roads likely to be affected, develop alternate traffic routes, and determine barricade and signage needs.
- Assess emergency transportation routes (ETRs) and determine priorities for maintenance and debris removal.
- Coordinate debris removal from storm drains, roadways, public rights-of-way, and areas potentially impacting public safety or health
- Coordinate with utility providers to protect/restore services.

4.1.4 Health, Housing and Human Services (H3S)

- Coordinate health and human services response.
- Serve in Unified Command.
- Provide staff for EOC operations.
- Assist those with access and functional needs.
- Identify critical facilities in at-risk areas.
- Coordinate emergency medical services and care for injured individuals.
- Assist in coordinating volunteer recruitment and deployment.
- Evaluate contamination of potable water sources and disruption of sanitary services; evaluate other environmental or public health concerns.
- Provide public health information to Unified Command/Public Information Officer for dissemination to the public
- Work with the American Red Cross in opening and operating shelters for evacuated persons and services for special needs populations

4.2 Support Agencies**4.2.1 Clackamas County Emergency Management**

Clackamas County Emergency Management (CCEM) assists in incident management and multi-agency/jurisdictional coordination.

- Implement the EOP.
- Activate the Situation Assessment Team.
- Activate the EOC.

IA 2. Geologic Emergencies

- Assist Command.
- Advise the County Administrator and Board of County Commissioners.
- Facilitate the Emergency Declaration process.
- Serve as the EOC Manager.
- Coordinate with city, regional, and State counterparts.
- Request Clackamas Amateur Radio Emergency Services (CARES) activation

4.2.2 Public and Governmental Relations

- Provide staff for the Public Information Officer and Joint Information Centers.
- Develop and coordinate a Joint Information System.
- Work with local, State, regional, and Federal jurisdictions.
- Gather, prepare, and have Incident Command approve all communications sent to media, jurisdictions, and employees.

4.3 Volunteer Agencies**4.3.1 American Red Cross**

The American Red Cross provides and manages shelter and mass care operations for citizens who are victims of disaster and feeding and support services for emergency responders. The American Red Cross will:

- Activate and operate emergency shelters for displaced citizens at the direction of Command.
- Provide feeding, basic health, and behavioral health services and welfare assistance.
- Provide an American Red Cross liaison to the EOC.

4.3.2 Clackamas Amateur Radio Emergency Services

- Request that HAM operators report actual or potential hazards and incident conditions to the EOC.
- Assist with Countywide damage reporting.
- Establish an incident-specific net operations plan

IA 2. Geologic Emergencies**5 Concept of Operations**

The Department of Transportation and Development, Sheriff's Office, Health Housing and Human Services (H3S), and Fire Defense Board share primary responsibility for geologic incidents.

Smaller, more isolated geologic incidents are normally managed using internal and mutual aid resources, with various County agencies providing support as needed. For example, during periods of volcanic ash fallout, the Department of Human Services develops and disseminates critical health-related information through the Community Health Division. Law enforcement agencies have primary responsibility for evacuation triggered by geologic incidents. Fire agencies provide special teams to extricate victims from vehicles and to search for and rescue victims in a collapsed structure. The Roads Division is responsible for keeping surface routes clear and/or establishing detour routes. Effective response to a major incident will require the combined efforts and resources of all County agencies.

A major geologic incident is a County emergency requiring notification of CCEM, implementation of the EOP, and activation of the EOC. All geologic incidents are managed according to the National Incident Management System (NIMS) and Incident Command System (ICS).

As time permits, CCEM will convene the Situation Assessment Team to gauge existing and potential risks and to determine appropriate actions that the County should take to minimize hazard impact.

All agencies tasked under this appendix will develop and maintain internal operating plans and implementing checklists consistent with the EOP.

6 Direction and Control**6.1 County**

Depending on the numbers of people affected, the area and extent of the damages, and the response operations required, the incident initially may be managed from a field Incident Command Post or from Department Operations Centers. As the scope of the damage and response increase, and/or more agencies become involved, overall management of the incident will normally transfer to Unified Command in the EOC.

When an IC determines that incident response will require resources beyond those available day-to-day and through mutual aid, requests for assistance should be coordinated through the EOC. If time does not permit pre-coordination, the EOC should be notified as soon as possible. If the needed resources are not available, the County will request State assistance through an Emergency Declaration.

IA 2. Geologic Emergencies**6.2 Cities**

Cities have primary responsibility for the safety and well-being of their citizens and for resource allocation and emergency operations within their jurisdictions. Cities are encouraged to develop EOPs and to work closely with CCEM to integrate preparedness, response, and recovery activities. An intergovernmental mutual aid agreement between the County and cities is available to all jurisdictions that choose to participate. This agreement establishes procedures for requesting and providing mutual aid resources in an emergency.

Cities may request County assistance through mutual aid or through an Emergency Declaration. All city emergency declarations need to be submitted to the County for forwarding to the State, as necessary.

6.3 Special Districts

County officials collaborate with special districts in coordinating emergency preparedness, response and recovery operations. An intergovernmental mutual aid agreement between the County and special districts is available to all jurisdictions that choose to participate. The agreement establishes procedures for requesting and providing mutual aid resources in an emergency.

6.4 Regional

The ETRs receive priority damage assessment, maintenance, and repair to ensure that these major transportation corridors are available to move people to safety and to move personnel and equipment for response operations. (An ETR map is available in the EOC Library.)

Clackamas County is a participant in the Inter-County Omnibus Mutual Aid Agreement that provides a framework for counties to request mutual aid from each other in emergencies, saving time and minimizing confusion during an incident.

6.5 State and Federal Assistance

Geologic hazards are monitored by the United States Geologic Survey (USGS). Seismic hazards or earthquakes are monitored by the Pacific Northwest seismograph network. This network provides data from seismometers across Washington and Oregon and is administered by the University of Washington. Volcanic hazards are monitored by the Cascades Volcanic Observatory. These USGS sponsored agencies will work closely with County agencies in the event of an earthquake or volcanic eruption.

The Oregon Department of Forestry operates and maintains a network of instrumentation to identify potential landslides, and administers a landslide warning system throughout the State. The Oregon Department of Forestry is responsible for notifying the County when landslides warnings are being issued.

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The National Weather Service (NWS) is responsible for alerting public agencies and the general public of potentially dangerous conditions and impending emergencies. The NWS forecasts daily winds from surface to 50,000 feet for Mount St. Helens and provides an ash fallout advisory whenever conditions warrant. The NWS forecast for the Portland area may be found at <http://www.wrh.noaa.gov/pqr/>

If incident response requires resources beyond those available to the County on a day-to-day basis and through mutual aid, Incident Command will request additional resources through an Emergency Declaration. EOC staff will forward the declaration to the Oregon Office of Emergency Management (OEM) for submission to the governor. OEM coordinates State resources and response and will seek a State declaration if necessary.

7 Annex Development and Maintenance

The Director of the Department of Transportation and Development, Fire Defense Board Chief, Sheriff, and Director of the Department of Human Services are responsible for ensuring that this appendix and supporting plans are updated at least annually, after every incident or exercise to which it applies, or as changes occur. CCEM is available to assist as requested.

8 Supporting Plans and Procedures

- Annex D - Evacuation
- Annex H - Damage Assessment

EOC Library

- Mt. Hood Coordination Plan
- Natural Hazard Mitigation Plan

9 Appendices

None at this time.

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IA 3 – Terrorism (FOUO)

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NOTE:

This annex has been classified as For Official Use Only (FOUO) and is not to be included in public copies of the Clackamas County EOP. This annex is maintained by Clackamas County Emergency Management and is included in the EOC Library.

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