

# Earthquake Sample Annex: A Fictional Example for Schools Before, During, and After an Earthquake



☎ (855) 781-REMS (7367)

✉ [info@remstacenter.org](mailto:info@remstacenter.org)

🐦 [@remstacenter](https://twitter.com/remstacenter)

🌐 <https://rems.ed.gov>

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Annexes are a critical component of any comprehensive, high-quality emergency operations plan (EOP). Threat- and hazard-specific annexes, such as those created to respond to natural, technical, and biological hazards, as well as those created to respond to adversarial, incidental, and human-caused threats, ideally describe and outline goals, objectives, and courses of action that should be undertaken before, during, and after a specific threat or hazard occurs. Every EOP annex should align with all applicable state and local laws and regulations and is most effective when tailored to a specific hazard or threat present in your community.

This document presents a scenario and a sample Earthquake Annex from a fictional elementary school. Intended to provide one potential example of the content, format, and structure of an annex, the following sample Earthquake Annex is a reference tool and should not be copied or used as a template. All annexes and appendices referenced within are fictional and are intended to illustrate the interconnectedness of a real plan.

## SCENARIO

Edgewater Elementary School is in an area that, according to the U.S. Geological Survey, has a high probability of experiencing an earthquake. In many parts of Oregon, earthquakes are a serious threat and can strike without warning. We must be prepared for an earthquake occurring within the state, as well as a potentially much larger earthquake offshore, along the Cascadia subduction zone. If an earthquake were to occur, it could severely damage not only the school but also a lot of Oregon's infrastructure. We expect that roads could be impassible, bridges severely damaged, and utilities destroyed, and it may be weeks or months before this infrastructure is repaired. Mitigating potential hazards before an earthquake strikes, being prepared to take protective measures when the ground shakes, and preparing to meet the immediate and short-term needs of students and staff members following an earthquake are essential elements in our *Earthquake Annex*.

# BEFORE THE EARTHQUAKE

## GOAL

**Prevent injuries, loss of life, and property damage, and be equipped to meet the basic needs of the whole school community.**

## OBJECTIVES

- **Train the whole school community in earthquake response**
- **Conduct structural and nonstructural mitigation**
- **Inspect and replenish emergency supplies**

## COURSES OF ACTION

### All Staff and Substitutes

#### *Before School Starts in the Fall*

- Take our SafeSchools online Earthquake training, which is located on the staff secure Website. District Human Resources will verify compliance.

### School Bus Drivers and Type 20 Activity Bus Drivers

#### *In August/As Needed*

- Take our SafeSchools online Bus Driver Earthquake and Tsunami training, which is located on the staff secure Website. Review the Edgewater School District *Tsunami Hazard Maps* for your route and familiarize yourself with high-ground evacuation routes. Print and keep the maps as they relate to each specific bus route on each bus.
- Training will occur in August for school bus drivers and during certification and recertification for Type 20 drivers.
- Consult with the District Safety Office if guidance is needed.

### School Administrator and New Staff

#### *Before School Starts in the Fall*

- Orient new staff members to building-specific post-earthquake evacuation routes and tsunami evacuation routes (see the *Evacuation Annex\**), the location of emergency supplies (see the *Emergency Cache Appendix*), and expectations for immediate and short-term care of students (see the *Overnight Sheltering Annex*).
- Indicate compliance on the "Planning Team Roles & Responsibilities Form."

### School Nurse/Health Assistant

#### *Before School Starts in the Fall*

- Inventory the emergency medical supplies in the emergency cache. See the *Emergency Cache Appendix* for the list of medical supplies (type and quantity) included.
- Check all supplies for expired or damaged items. Consider if additional supplies are needed because of any changes in the school population.
- Coordinate with the district nurse for replacements or additional supplies, as needed.

# BEFORE THE EARTHQUAKE

## Kitchen Manager

### Before School Starts in the Fall

- Inventory emergency food and water supplies in the emergency cache. See the *Emergency Cache Appendix* for the list of food and water resources (type and quantity) included.
- Check supplies for expired or damaged items. Consider if additional supplies are needed because of any changes in the school population.
- Coordinate with the District Food Services Manager for replacements.

## School Nurse, Special Education Teachers, and Other Staff, as Needed

### Within First 2 Weeks of the School Year

- Refer to student health forms and use the “Special Accommodations for Drills & Emergencies Form” and training video to update/create individual response plans for those with disabilities or access and functional needs. Include family in the planning process.
- Review individual response plans with teachers, and practice responses with those students, making sure the appropriate supplies/equipment associated with each plan is distributed to the correct locations.
- Consult with the District Safety Office and occupational therapist(s) if guidance is needed. Send updated plans to the district nurse and the planning team.

## School Administrator

### Week Prior to the Start of the School Year

- Send an email to all staff members with a reminder to follow the “Classroom Safety Checklist,” which is made available in their mailbox before school starts in the fall, when setting up their classrooms.
- Disseminate ShakeOut “Drop, Cover, and Hold



On” posters for each room.

- Make assignments so each room (academic and nonacademic rooms) are assigned a buddy room and adult.

### Before School Starts in the Fall

- Ensure that all staff members are aware of and trained in their roles and responsibilities before, during, and after an earthquake with consideration of a possible tsunami. Have staff sign off on training requirements fulfilled.
- Work with media in advance so that they are prepared to post proper information and sources for parents/guardians (hereafter referred to as “families”) to receive updates.
- Review the *Earthquake Annex* with the planning team, including members from the school district and community partners.
- Consult with the District Safety Office, as needed.

## All Teachers

### Within the First 2 Weeks of the School Year

- Review earthquake procedures with students. Show training video, and discuss scenarios; Drop, Cover, and Hold On procedures; and

# BEFORE THE EARTHQUAKE

evacuation options with your students.

- Practice in various locations at school so all students are prepared to take protective actions even when tables/desks are not available, and they are not in their classroom.
- Consult with the District Safety Office if needed.

## Teen Community Emergency Response Team (CERT) Leader or Occupational Safety and Health Administration (OSHA) Health and Safety Committee

### Within First 2 Weeks of the School Year

- Inventory, inspect, and replenish light search and rescue supplies in the emergency cache. See the *Emergency Cache Appendix* for the list of supplies. Consider if additional supplies are needed because of any changes in the school population.
- Train Teen CERT students on their possible roles following an earthquake.
- Schedule a demonstration assembly with the school administrator for October.

## Whole School Community

### October (Great Oregon Shakeout) and April (or month of your choice)

- Register with the Great Oregon Shakeout Website.
- Conduct and participate in two earthquake drills per year: one starting in a classroom environment and one during noninstructional time. At least one drill should have a blocked evacuation route.
- Each drill includes Drop, Cover, and Hold On procedures as well as a complete evacuation. After each drill, debrief with staff and students; create an after-action report that evaluates results, identifies gaps or shortfalls, and documents lessons learned; and make immediate corrections, if needed, to the

## What to do during an Earthquake:



### Earthquake Annex.

- Hold a student assembly with Teen CERT demonstrating response.
- Send drill evaluation reports to the District Safety Office.

## OSHA Health and Safety Committee

### September and January

- When conducting safety inspections of the school building, classrooms, and nonacademic spaces, pay particular attention to the nonstructural earthquake mitigation requirements on the checklist, such as the following:
  - Heavy and/or glass items are not stored above head level.
  - Bookshelves and other heavy or tall furniture are secured to wall studs.
  - Science storage areas have cabinet fasteners.

# BEFORE THE EARTHQUAKE

- Follow instructions on the building- and room-specific inspection checklists. Direct staff members to make immediate corrections within their control. Create a list of short- and long-term projects for earthquake mitigation planning.
- Submit a *Safety Inspection Report* to the District Safety Office.
- Submit work orders to the District Facilities Department for mitigation, as needed.

## Planning Team Members, Including Representatives From the Fire Department and District Safety Office and the City Engineer

### March

- Assess and plan for structural earthquake mitigation.
- Review the *Rapid Visual Screening Report* and the most recent *Safety Assessment* for the school.
- Prioritize needs and review/develop an *Earthquake Mitigation Plan*.
- Submit the *Earthquake Mitigation Plan* request to the Facilities Department.

## School Administrator and All Staff Participating in Field Trips or Athletic Events

### Before Activity Trip

- Take our SafeSchools online Activity Trip Safety training, which is located on the staff secure Website. Refer to the *Activity Trip Annex* and be prepared to follow both the earthquake and the tsunami protocols.
- See the *Tsunami Evacuation Maps* on our Website; use tsunami evacuation routes and assembly areas to guide your activity route and destination.
- See the *Communications and Warning Annex*; the *Public Health, Medical, and Mental Health Annex*; and the *School Bus Annex*. Work with the school administrator and create integrated earthquake/tsunami courses of action specific to the trip.
- Review courses of action with all staff, chaperones, and students attending.
- Consult with the District Safety Office if guidance is needed.



# DURING THE EARTHQUAKE

## GOAL

Prevent students and staff from injury and meet the basic needs of the whole school community.

## OBJECTIVES

- Take immediate protective measures during the shaking
- Safely evacuate after the shaking stops
- Provide for immediate and short-term medical, physical, and emotional needs

## COURSES OF ACTION

### Whole School Community

- All students, staff members, and visitors should immediately Drop, Cover, and Hold On. This includes teachers.
  - **DROP** down onto your hands and knees (before the earthquake knocks you down). This position protects you from falling but allows you to still move if necessary.
  - **COVER** your head and neck with one arm and hand. If a sturdy table or desk is nearby, crawl underneath it for shelter. If no shelter is nearby, crawl next to an interior wall (away from windows). Stay on your knees; bend over to protect vital organs.
  - **HOLD ON** until the shaking stops. If you are under shelter, hold on to it with one hand; be ready to move with your shelter if it shifts. If you are not under shelter, hold on to your head and neck with both arms and hands.
- Implement individual earthquake response plans (which were created using the “Special Accommodations for Drills & Emergencies Form”) for those with disabilities or access and functional needs as best as you are able, given the setting and situation you find yourself in when the shaking starts.
  - During the shaking, try to give verbal instructions and encouragement to the students in your care, reminding them of protective measures to take and working to calm them.
  - If the fire alarm sounds while the ground is still shaking, wait until the shaking stops before evacuating.
  - When the shaking stops, instruct students to hold their position temporarily while you assess the situation. There may be broken glass, debris, loose ceiling tiles, blocked or jammed exit doors, or other hazards. There may be injuries or students who are trapped. Quickly tend to immediate life safety needs, including extinguishing any small fires.
  - Work to safely evacuate your students, whether or not the fire alarm sounds. Instruct students to be watchful for hazards, to be prepared to take alternative routes, and to help one another since there may be injuries. See the *Evacuation Annex*.
  - If students are trapped, make a plan with your Buddy Room Teacher for one teacher to exit with both classes while the other stays with the trapped student(s). Be sure to write the names and room numbers of all staying behind for the Buddy Room Teacher to report at the Assembly Area once evacuated. See the *Accounting for All Persons Annex*.



# DURING THE EARTHQUAKE



- If it appears safe and there is enough time, evacuate with your yellow emergency supplies bucket and with student coats/backpacks, if students can access them quickly.
  - If an aftershock occurs while you are exiting, Drop, Cover, and Hold On until the shaking stops.
  - If you are outside during an earthquake, stay outside. Try to move away from buildings, utility poles, trees, and other hazards into a clear, open space. Drop, Cover, and Hold On until the shaking stops.
  - Once at the Assembly Area, follow protocols to account for all students, staff members, and visitors in your care. See the *Accounting for All Persons Annex*.
  - Continue to supervise students, reassuring them and preparing them for next steps such as family reunification, sheltering, etc.
  - Implement protocol to account for all students, staff members, and visitors. (See the *Accounting for All Persons Annex*.)
  - Implement light search and rescue protocols, depending on the outcome of accounting for all students, staff members, and visitors, using Teen CERT and/or trained staff. (See the *Light Search & Rescue Annex*.)
  - Implement emergency medical protocols to meet immediate medical needs. Activate Teen CERT and/or trained staff to triage and set up/operate a medical treatment area. (See the *Public Health, Medical, and Mental Health Annex*.)
  - Monitor official warning channels, and be prepared for a possible tsunami. (See the *Tsunami Annex*.)
  - Implement family reunification protocols. Prepare students and staff for delayed reunifications since damage to roads and bridges may make reunification an event lasting several days. (See the *Family Reunification Annex*.)
- Incident Command, Unified Command, and General Staff (as Needed)**
- The principal or designee establishes the Incident Command Post and assigns incident management personnel, as needed, according to Incident Command System (ICS) structure.

# DURING THE EARTHQUAKE

- Communicate your school status to the district office if/when able. If normal communication methods are not available, consider options such as amateur (ham) radios, bus radios, and school two-way radios. (See the *Communications and Warning Annex*.)
- Implement emergency communications protocols for communicating with families, as you are able and as options become available. Coordinate with community partners such as the county Emergency Operations Center and amateur radio partners if normal communication methods are not available. (See the *Communications and Warning Annex*.)
- Set up an Information Center area outside the school as a community reception point. This area will provide information dissemination and direct people to appropriate areas (volunteer coordination, family reunification information, etc.). (See the *Communications and Warning Annex*.)
- Implement overnight sheltering protocols for delayed reunification situations, if needed. Determine which staff members can stay and which need to leave. (See the *Overnight Sheltering Annex*.)
- Coordinate with first responders and the district incident command team as they become available.
- **Non-Shelter School:** After initial family reunifications are complete for families who are able to get there, implement your off-campus evacuation plan, transporting the remaining students to the nearest “shelter school.” (See the *Evacuation Annex*.) Post a sign on your school’s main entrance door indicating where students have been relocated to so families can report there for reunification.
- **Shelter School:** Deploy emergency cache resources to meet immediate and short-term basic needs. Enlist the help of older students and adult volunteers. (See the *Emergency Cache Appendix*.)



# DURING THE EARTHQUAKE

- Consult the “Incident Commander Checklist,” found near the bottom of the *Emergency Plan Flip Chart*, for additional action steps to consider.

## All Staff and Coaches Participating in Field Trips or Athletic Events

- Implement earthquake procedures (Drop, Cover, and Hold On and evacuation, as described above) and the specific earthquake/tsunami response procedures applicable to your location.
- Follow Activity Trip Emergency Procedures (see the *Activity Trip Annex*):
  - Tend to immediate health and safety needs.
  - Account for and supervise all students.
  - Communicate your status and needs with the school/district office as you are able.
  - Follow procedures for the appropriate release/return of students as you are able.
- Coordinate with the host location for the possibility of short-term sheltering and care of your group.

## School Bus Drivers and Type 20 Activity Bus Drivers

### If you feel the ground shake:

- Decrease your speed and pull to the side of the road as quickly as possible. If feasible, stop out of the tsunami zone, and try to avoid stopping on or under overpasses or bridges, or near signs, power lines, trees, buildings, or any other hazard that might fall onto your bus.
- Secure the bus: shut off the motor, set the brake, and remove the keys. Activate four-way flashers.
- The students and you should keep your seat belts on, if seat belts are available. Students should take a protective position in their seats, covering their heads and turning away from windows.

- If you are in a tsunami zone, after the shaking stops immediately move to the nearest high ground by bus, if possible, or by foot if the road is not passable. You may have only minutes to get to high ground, so take immediate action.
- If you are not in a tsunami zone, stay put. Keep students on the bus if it is safe. Conserve fuel, as you may need it to provide warmth and for radio contact.
- Stay on high ground. Powerful tsunami waves and surges can come and go for up to 24 hours. You may have to shelter there for an extended period of time. Reassure students and prepare them for this possibility. Follow the protocols in the *Overnight Sheltering Annex*, if needed.
- Communications are often challenging during large earthquakes. Attempt to contact Bus Dispatch. If you are not able to reach Bus Dispatch, refer to the emergency phone list in your *Bus Packet*, and try those phone numbers to relay information. Sending and receiving messages via text rather than a phone call may be easier in an emergency. (See the *Communications and Warning Annex*.)
- Prepare students for aftershocks. Drop, Cover, and Hold On during an aftershock if you are outside. Stay away from poles, trees, power lines, etc.



# AFTER THE EARTHQUAKE

## GOAL

Restore a safe and healthy learning environment.

## OBJECTIVES

- Communicate with stakeholders
- Address emotional needs
- Inspect and clean up the physical environment
- Reopen school
- Evaluate and refine plans

## COURSES OF ACTION

### Incident Command/Unified Command

- Transfer operational control back from ICS positions to those used on a daily basis.

### School Administrator With Support From District Staff

- Using the protocols in the *Communications and Warning Annex* provide regular communications (as technology permits) to staff members, the community, families, media, and other stakeholders on all aspects of the recovery process and plan (See the *Recovery Annex* for a list of subjects to be considered in communications.)

- Activate the Crisis Response Team to address the short and ongoing long-term mental health needs of students and staff members. (See the “Health, Social, Emotional, and Behavioral Recovery” section of the *Recovery Annex*.)
- Refer to the “Physical Recovery” chapter of the *Recovery Annex*, and follow procedures for building inspection requirements, fire and health inspections, cleanup/repair of the school, and decisions about reoccupancy.
- Refer to the *Continuity of Operations Annex* to address needs such as essential services, essential personnel, staffing for reconfigured schools, etc. Coordinate with the school district for assistance.



# AFTER THE EARTHQUAKE



- Refer to the “Academics Recovery” chapter of the *Recovery Annex*, and review options for alternate education locations and mediums, provisions for students who are not able to get to an alternate location, etc.
- Refer to the “Business Services” chapter of the *Recovery Annex*, and review options for transportation, food service, health services, etc.
- Devise a plan for reopening school. Refer to the “Reopening a School Checklist,” which is found in the “Physical and Structural Recovery” chapter of the *Recovery Annex*.

## School Administrator and Planning Team

- Conduct regular debrief sessions with staff members. The school administrator will determine the frequency.
- Evaluate the effectiveness of the school’s implementation of the *Earthquake Annex*. Create an after-action report that evaluates results, identifies gaps or shortfalls, and documents lessons learned. Update the EOP, including annexes, and roles; retrain as needed.

- Evaluate the effectiveness of the emergency cache supplies to meet immediate and short-term needs following an earthquake. See the *Emergency Cache Appendix*. Adjust protocols and restock as needed.
- Communicate regularly with students, families, and staff members.
- Continually monitor and address mental health needs. (See the “Health, Social, Emotional, and Behavioral Recovery” section of the *Recovery Annex*.)
- Continually monitor physical needs of students and staff members, such as shelter, food, health care, etc. Coordinate with appropriate district support staff, as needed.
- Meet with the OSHA Health and Safety Committee before reopening school.
- Conduct a safety inspection using the “Inspection Checklist Form.” Pay particular attention to the nonstructural earthquake mitigation requirements on the checklist, such as looking around for things that might fall during shaking, securing bookshelves and other heavy or tall furniture to wall studs, ensuring that there is no storage on top of cabinets, checking science storage areas for cabinet fasteners, etc.

# AFTER THE EARTHQUAKE

- Arrange for corrective measures to be complete before school reopens.

## All Staff

- Be alert for ongoing emotional support needed for students, other staff, and self. Communicate concerns and needs to the school administrator or the Crisis Response Team coordinator. (See the “Health, Social, Emotional, and Behavioral Recovery” section of the *Recovery Annex*.)
- Be alert to the ongoing physical needs of students and staff, such as housing, food, health care, etc. Communicate concerns and needs to the school administrator.
- Be alert to new or emerging hazards in the environment. Communicate safety concerns to the school administrator and/or OSHA Health and Safety Committee.

- Expect and prepare students for aftershocks; follow procedures in the *Earthquake Annex* for all aftershocks.

\*References to other annexes, such as this reference to the “*Evacuation Annex*,” do not refer to other sample annexes available from the REMS TA Center, but are instead meant to illustrate the interconnectedness of a real emergency operations plan. All sample annexes are fictional and represent fictional schools. These are for reference only and do not depict actual decisions made by collaborative planning teams. A true annex would reflect the unique characteristics, capabilities, resources, and policies of a school and its school district.

View more sample annexes on our Website at  
<https://rems.ed.gov/REMSPublications.aspx>.



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MANAGEMENT FOR SCHOOLS  
**REMS**  
TECHNICAL ASSISTANCE CENTER



(855) 781-REMS (7367)



[info@remstacenter.org](mailto:info@remstacenter.org)



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