### **Resources on Preparing for Floods at Education Agencies**

<u>Preparing for Floods at Institutions of Higher Education Fact Sheet</u>, REMS TA Center (Higher ed). This publication provides resources on flood planning that institutions of higher education (IHEs) can use to incorporate flooding in higher ed emergency operations plans (EOPs) and participate in flood-related preparedness activities.

<u>Preparing for Floods at K-12 Schools and School Districts Fact Sheet</u>, REMS TA Center (K-12). This publication provides information on flood planning that public and nonpublic schools and school districts can use to incorporate flooding in school EOPs and participate in flood-related preparedness activities.

<u>Preparing for Floods at State Education Agencies Fact Sheet</u>, REMS TA Center (K-12 and Higher ed). This publication provides information on flood planning that state education agencies (SEAs) can use to incorporate flooding in EOP development efforts and participate in flood-related preparedness activities.

#### **Flood Annex Development**

Planning for Natural Hazards That May Impact Students, Staff, and Visitors, REMS TA Center (K-12 and Higher ed). This topic-specific Web page contains resources from the REMS TA Center, ED, and other Federal agencies related to planning for natural hazards, which includes floods.

Recurring Flooding at Oak Grove Lutheran School in Fargo, North Dakota, REMS TA Center (K-12). This publication captures lessons learned from a private pre-K-12 school regarding structural preparedness, personnel preparedness, response efforts, structural recovery, and other flood preparedness efforts in the context of recurring flooding in the school community. Their experience can help inform other schools on how to prepare for, mitigate the effects of, and recover from flooding.

When the Weather Turns Severe: A Guide to Developing a Severe Weather Emergency Plan for Schools, National Weather Service (NWS) (K-12). This publication contains information on severe weather, such as flash flooding and severe flooding, obtaining emergency weather information, alerting educators and students, and actions that can be taken, including by bus drivers, during severe weather events.

<u>Prepare Your Organization for a Flood Playbook</u>, Federal Emergency Management Agency (FEMA) (K-12 and Higher ed). This publication contains a sample tabletop exercise with a flood scenario and step-by-step instructions.





#### **Data Sources for Floods**

<u>FEMA Flood Map Service Center</u>, FEMA (K-12 and Higher ed). This interactive map contains information for the public on flood hazards and was created in support of the National Flood Insurance Program (NFIP).

<u>Flood Inundation Mapping Program</u>, U.S. Geological Survey (USGS) (K-12 and Higher ed). This Website features an interactive flood inundation map that contains real-time data and flood forecasts, as well as potential loss estimates.

<u>Data Visualization: Historical Flood Risk and Costs</u>, FEMA (K-12 and Higher ed). This interactive data tool provides information on historical flood risk and potential flood-related costs by state and by county.

<u>Storm Events Database</u>, National Oceanic and Atmospheric Administration (NOAA) (K-12 and Higher ed). This interactive data tool generates information on coastal flood, flood, and lakeshore flood events by state and county.

<u>State Flood Information</u>, NWS (K-12 and Higher ed). This Web page contains an interactive map with information on the five most significant floods that have occurred and NWS Forecast Offices and River Forecast Centers in each state.

#### **Flood Mitigation**

Mitigation and Resiliency Strategies for Schools and Institutions of Higher Education Webinar, REMS TA Center and U.S. Department of Education (ED) with FEMA, Orange County Department of Education in California, and Georgetown University in the District of Columbia (K-12 and Higher ed). This archived Webinar presents key considerations for mitigation, the process for including mitigation activities in planning efforts, how school and IHE mitigation and resiliency plans integrate with those at the local and state level, and practical examples of how schools and IHEs have made their campuses more resilient to emergencies.

<u>Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds</u>, FEMA (K-12). This publication is intended to provide design guidance for the protection of school buildings and their occupants against natural hazards. Chapter 5 focuses on floods exclusively, including the nature of floods and its effect on vulnerability, the consequences of building exposure, and methods of reducing its effects.

<u>Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards</u>, FEMA (K-12 and Higher ed). This publication contains ideas for communities to help mitigate the impact of a variety of natural hazards, such as floods. Strategies cover local planning and regulations, structure and infrastructure projects, natural systems protection, and education and awareness programs.





<u>Flood Mitigation Assistance Grant Program</u>, FEMA (K-12 and Higher ed). This Web page contains information on the grant program, which aims to reduce or eliminate long-term risk of flood damage to structures insured under NFIP. Eligible applicants include states, territories, and federally recognized tribes, and subapplicants include state agencies and local governments/communities, amongst others.

<u>Local Mitigation Planning Resources</u>, FEMA (K-12 and Higher ed). This Web page contains resources for local governments to participate in and support the updating and implementation of local mitigation plans. This Web page features the <u>Local Mitigation Planning Handbook</u>, which contains practical approaches and tools for local governments to use to develop or update their local hazard mitigation plans.

<u>State Mitigation Planning Resources</u>, FEMA (K-12 and Higher ed). This Web page contains resources for state governments to participate in and support the updating and implementation of state mitigation plans.

#### Flood Alerts, Communications, and Warnings/Notifications

<u>NOAA Weather Radio</u>, NWS (K-12 and Higher ed). This product offers the latest weather information via a nationwide network of radio stations and broadcasts 24 hours a day, 7 days a week. The REMS TA Center publication <u>All-Hazards NOAA Weather Radio Network Now Available</u> describes this tool and its features, including how schools can use it.

<u>NWS Geographic Information Services (GIS) Portal</u>, NWS (K-12 and Higher ed). This Web page displays an interactive map of the national forecast, as well as watches, warnings, and advisories issued by NWS.

<u>Flood Safety: Wireless Emergency Alerts</u>, NWS (K-12 and Higher ed). This video describes how individuals can enable a feature to automatically receive Wireless Emergency Alerts from the NWS about flash flooding nearby.

<u>IS-271.A: Anticipating Hazardous Weather & Community Risk Online Course</u>, Emergency Management Institute (K-12 and Higher ed). This online course covers weather basics, weather forecasting, warning partnership information, fact sheets for weather and non-weather-related hazards, and human behavior and community response.

### **Creating a Culture of Flood Preparedness**

<u>StormReady® Program</u>, NWS (K-12 and Higher ed). This voluntary program aims to increase communities' preparedness for weather and flood emergencies to create a <u>Weather-Ready Nation</u>. Education agencies can apply to become a StormReady® site.





<u>TsunamiReady® Program</u>, NWS and National Tsunami Hazard Mitigation Program (K-12 and Higher ed). This voluntary program aims to increase communities' preparedness for tsunamis, including subsequent flooding, to create a <u>Weather-Ready Nation</u>. Education agencies can apply to become a TsunamiReady® site.

<u>Flood Safety Social Media Toolkit</u>, FEMA (K-12 and Higher ed). This Web page contains flood safety and preparedness messages that may be shared and customized via social media channels.

<u>National Seasonal Safety Campaign</u>, NWS (K-12 and Higher ed). This Web page contains four seasonal campaigns, all of which include the hazard of flood, and a hurricane campaign. Seasonal resources include Websites, social media, infographics, videos, and other materials.

<u>Floods Happen. Lessen the Loss. A Coloring Workbook for Flood Education and Awareness</u>, NWS (K-12). This activity book was designed to increase students' and educators' understanding of flooding and flood safety.

<u>Size and Occurrence of Floods (Grade 6-8)</u>, USGS (K-12). This activity teaches students in grades 6-8 the occurrence of a flood event. This program connects to science, technology, engineering, and math (STEM) initiatives.

<u>Size and Occurrence of Floods (Grade 9-12)</u>, USGS (K-12). This activity teaches students in grades 9-12 the likelihood of a 100-year, 50-year, 10-year, or 5-year flood occurring and ways in which individuals and property may be protected from floods. This program connects to STEM initiatives.

<u>Floods iQuest</u>, National Aeronautics and Space Administration (K-12). This interactive lesson introduces middle school students to the many aspects of flooding. This program connects to STEM initiatives.

<u>Student Tools for Emergency Planning</u>, FEMA (K-12). This classroom-based curriculum was designed to teach fourth- and fifth-graders about natural hazards, including floods, and emergency preparedness.

Ready Wrigley: Flooding and Mold, U.S. Centers for Disease Control and Prevention (CDC) (K-12). This activity book was developed so that educators, as well as families and caregivers, had an interactive way to discuss disaster preparedness and safe mold clean-up after a flood with children. This is also available in Spanish.

Young Meteorologist Program, NWS and National Education Association (K-12). This Web application (app) teaches kids about natural hazards, including floods, and how to prepare and





protect themselves from weather events via an interactive game. This program connects to both STEM and career and technical education (CTE) initiatives.

<u>Youth Emergency Preparedness Curriculum-Ready Kids</u>, FEMA (K-12). This classroom-based curriculum teaches kids what to do before, during, and after an emergency, including a flood, and is offered for grades 1-2, 3-5, 6-8, and 9-12.

<u>SKYWARN®</u>, NWS (K-12 and Higher ed). This is a voluntary program to train severe weather spotters. This program connects to both STEM and CTE initiatives.

<u>NWS Awareness and Preparedness Calendar</u>, NWS (K-12 and Higher ed). This state map contains information on weather safety events for each state and U.S. territory, including flood safety/awareness/preparedness weeks.

#### **Physical and Structural Recovery From Floods**

How Schools and Higher Ed Institutions Can Access FEMA's Public Assistance Program Webinar, REMS TA Center and ED with FEMA (K-12 and Higher ed). This archived Webinar shares information about grants available to educational facilities following a presidentially declared major disaster that involves a public assistance cause.

Mold Remediation in Schools and Commercial Buildings, U.S. Environmental Protection Agency (EPA) (K-12). This guidance contains information on mold prevention; investigating, evaluating, and remediating moisture and mold problems; water damage-cleanup and mold prevention; and mold remediation. The intended audience is building managers, custodians, and others who are responsible for school maintenance.

<u>Clinician Recommendations Regarding Return of Children to Areas Impacted by Flooding and/or Hurricanes</u>, American Academy of Pediatrics and Pediatric Environmental Health Specialty Units (K-12). This publication describes activities that must be completed before children can return to an area impacted by a flood, such as ensuring that basic utilities and public services are operating normally and learning environments are safe.

<u>Planning to Recover From Emergencies at Districts and Schools Webinar</u>, REMS TA Center and ED with Washington School Safety Center, Plaza Towers Elementary School in Oklahoma, and Norman Public Schools in Oklahoma (K-12). This archived Webinar describes key considerations for recovery, the process for including recovery activities in planning efforts, and lessons learned from emergency events.

<u>Managing Donations and Volunteers Before, During, and After School and Campus Emergency Events Webinar</u>, REMS TA Center and ED with FEMA and Joplin School District in Missouri (K-12 and Higher ed). This archived Webinar describes operational considerations for managing





donations and volunteers from the Federal and local perspective and shares lessons learned from Hurricanes Harvey and Irma and the 2011 tornado that impacted Joplin.

Supporting Displaced Students and Families During and After Emergency Events Webinar, REMS TA Center and ED with National Center on Homeless Education (K-12 and Higher ed). This archived Webinar provides a basic overview of why providing supports for homeless and displaced students and families during and after emergencies is important. It also provides insight that can help SEAs and LEAs, with their emergency management agency partners, understand how they can support students and families displaced from homes, communities, and school settings due to a natural disaster, such as a flood.

#### **General Flood Safety**

<u>Floods</u>, CDC (K-12 and Higher ed). This Website, which is also available in Spanish, contains information on preparing for a flood, practicing floodwater safety during a flood, and protecting your health when you return home after a flood.

<u>Floods</u>, FEMA (K-12 and Higher ed). This Web page contains tips on preparing for a flood, surviving during a flood, and staying safe after a flood.

<u>Flood Safety</u>, NWS (K-12 and Higher ed). This Website was designed to keep the public safe in a flood event, including what to do before, during, and after a flood.

<u>USGS Flood Information</u>, USGS (K-12 and Higher ed). This Website contains information about active flood events, historical regional flood events by year, state-based flood information via an interactive map, and flood resources.

<u>Severe Weather 101 – Floods</u>, National Severe Storms Laboratory (K-12 and Higher ed). This Website provides information on the basics, types, detection, and forecasting of floods.

<u>Flood Mobile App</u>, American Red Cross (K-12 and Higher ed). This Web page features a mobile app that shares information on preparing for flooding, evacuating, and returning safely home. This app is also available in Spanish.

<u>Flooding</u>, EPA (K-12 and Higher ed). This Web page, which is also available in Spanish, provides information and resources on preparing for flooding before, during, and after a flood.



