AECOM Resilience Solutions for the Coronavirus **Pandemic** Partnering to tackle coronavirus challenges with industry-leading expertise Disaster Resilience Solutions Scott Edelman, Senior Vice President scott.edelman@aecom.com

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How AECOM can help

AECOM has more than 30 years of experience helping public and private sector organizations prepare for, respond to, and recover from disasters of all kinds. Our staff includes emergency management specialists who know how to prepare and how to respond in a way that keeps your staff and your customers secure. Our engineers, planners, scientists, construction managers, and other specialists can support your emergency management, transportation, environmental, facility management, and construction teams.

Some examples of the business needs that we can help you respond to are listed below.

Agency or Business Challenges



AECOM Services

What do I need to consider in my organization's response?	Program management, risk assessment
How do we plan for disruption of work?	Workplace continuity/Continuity of Operations Planning (COOP), workplace strategy exercises
How can we quickly adapt our hospitals or workplaces?	Rapid facility renovation, deployment of mobile health clinics
How do we talk with our employees and customers?	Change management and crisis communications
Our engineering, science, construction management, and program management staff are sick and can't work	Staff augmentation and on-site support
Where can I get staff on-site quickly when they can't travel?	Rapid mobilization – in every state
How can we create additional testing or treatment facilities?	Facility planning, design and design-build
How can my team travel around an area that is on lockdown?	Transportation planning
Our facilities are contaminated	Training and oversight for hazmat remediation
We need PPE, construction supplies, and associated material	Logistics and procurement support

Relevant Experience





Government

Legionella Response, US Postal Services, Washington, DC. AECOM assisted the USPS in the rapid response to several potential outbreaks of Legionnaire's disease (legionella) at their large mail processing plants. Immediately upon notification of these events, personnel met with state and local Department of Public Health and Federal OSHA representatives to develop a comprehensive investigative and remedial strategy.

Ebola Emergency Equipment and Supply Procurement and Logistics, US Air Force. In response to the Ebola outbreak in West Africa. We procured Personal Protective Equipment for OFDA and USAID. This included procurement of examination gloves, heavy duty gloves, hoods, masks, coveralls, boots, aprons, protective goggles, and disposable bags for quickturn delivery.

Emergency Call Center Management, US Virgin Islands. AECOM stood up two call centers within 24 hours for support in the USVI for a Federal emergency home repairs program to rebuild/repair hurricane-damaged houses. We provided scripts and training for call agents, helped develop software, and managed operations in two locations 12 hours a day, 7 days a week.

Emergency Operations Center GIS and Data Management, North Carolina Department of Emergency Management, NC. AECOM staff members worked with North Carolina Emergency Management, actively based in the Emergency Operation Center (EOC) before, during and after Hurricane Florence. We provided a variety of technical expertise, including updating mapping and damage assessments to support the state's IT, infrastructure and applications.

Damage Assessment and Restoration, US Navy, Naval Support Activity Panama City, FL. AECOM has provided three Industrial Hygienists to assess facilities, perform laboratory testing, report results to the client, and provide clean up and restoration including mold remediation in some facilities. AECOM quickly mobilized the day Hurricane Michael hit, with advance team personnel on site as required 24 hours later.

Santa Clara County Tuberculosis Clinic (SC TBRC). AECOM is currently providing architectural and engineering design for the renovation of the existing single story, freestanding light industrial building of approximately 19,200 SF on a 1.3-acre parcel in the City of San Jose, CA. TBRC will provide diagnosis and treatment of latent and active tuberculosis for the wider Santa Clara County community. The SC TBRC will provide comprehensive health assessments for newly arrived refugees, asylees, special immigrant visa holders and certified victims of trafficking.

Anthrax Sampling and Remediation, Anthrax US Postal Service. AECOM confirmed the presence of Anthrax at several postage and distribution centers. We conducted initial Anthrax sampling and assisted the USPS in easing Union concerns before, during, and after the sampling activities. The USPS established a multi-agency command center, managed by AECOM, to serve as a hub for Anthrax-related information.

Hurricane Response and Recovery Support, Puerto Rico and US Virgin Islands (USVI), FEMA. More than 600 AECOM employees have supported recovery efforts after Harvey, Irma and Maria. After Hurricane Maria and Hurricane Irma, an AECOM-led joint venture provided over 16,000 meal boxes and bottled water per day to Puerto Rico and the US Virgin Islands by working with four different warehouses, across two states, and over 620 personnel.

Small Business Emergency Recovery Support, New York City Department of Small Business Services. AECOM met with 520 small business owners to discuss their experiences after Hurricane Sandy. We illustrated steps related to insurance, business continuity, emergency preparedness, and even physical changes to their business space can help them become more resilient. After each site assessment, AECOM prepared a very detailed risk assessment report specifying what actions we believe the business owner should take to increase overall emergency preparedness.

Hurricane Rebuilding Case Management, USVI and NC. Supporting the state/ local governments after extensive residential housing damage and helped with case management during the repair process. We provided intake through our call centers, and individual cases were managed by trained case managers throughout the lifecycle of repairing their homes.

Relevant Experience



COVID-19 Cleanup and Disinfection, Miami Dade College - Medical Campus, Miami, FL. AECOM provided contractor oversight on cleanup and disinfection in the four main facilities, totaling 850,000 SF. Our team was on site within 48 hours of award and completed cleanup within 24 hours. AECOM's oversight responsibilities included supervision of personnel, procurement and distribution of personal protective equipment (PPE), development and enforcement of the safety and health plan, procurement of cleaning materials, and instruction on dilution methods.

Keesler Air Force Base Critical Repairs, Keesler AFB Medical Center, Biloxi, MS. AECOM provided damage assessments and critical repairs at Keesler AFB Medical Center, the US Air Force's second largest health care facility, following Hurricane Katrina. AECOM responded within 24 hours to urgently repair approximately 750,000 SF of health-care space so medical services could be reestablished as quickly as possible. Repairs included 75% of the basement, medical offices, 11 hospital clinics, morgue, kitchen, dining hall, and facility systems (HVAC, electrical, and data infrastructure).

Hazmat and Medical Waste Remediation, US EPA. AECOM mobilized 150+ professionals to support the USEPA's environmental response after Hurricane Katrina flooded hospitals, schools, warehouses, landfills and other sites to help clean hazardous materials and medical waste debris. AECOM led initial planning through disposal and closure and provided staff, including chemists, chemical technicians, H&S personnel, and cleanup technicians working in Level B/C/D protective equipment.

Field Hospital Deployment, University of Miami's Project Medishare, Haiti. An AECOM employee set up, operated, and lived at a 220-bed trauma tent field hospital in Port-a-Prince Haiti, immediately following the major earthquake of 2010. Over this six-month period, he and all the nurses and doctors who volunteered are credited with saving over 20,000 lives and performing thousands of difficult major surgical operations. Today this hospital operates as Bernard Mev Hospital, Port-a-Prince, Haiti.

Transportation and Utilities

HAZMAT Assessment, Beltsville Agricultural Research Center (BARC), USDA, Beltsville, MD. AECOM assisted the USDA ARS to completely demolish 30 buildings at its BARC campus. These buildings included laboratories, experimental greenhouses, office spaces, storage sheds, and other structures. 22 of these 30 buildings required a Hazardous Materials and Hazardous Substances Assessment (HMA).

Chemical, Biological, and Radiological Incident Response Planning, Metropolitan Transportation Authority, NY. MTA is the largest public transportation provider in the Western Hemisphere serving 15 million people daily over 5,000 square miles. As part of MTA's security strategy, we developed pre-incident, facility-specific, remediation, and recovery plans for B. anthracis (anthrax), VX nerve agent, and cesium-137 incidents for a large urban transit facility. The plans addressed rapid and effective recovery operations.







Business Continuity Plan Update, Aqua, PA. AECOM led the development of Aqua Pennsylvania's pre-incident and department-specific BCP and emergency response protocols for southeastern Pennsylvania's largest water distribution company. The effort also included assessing existing disaster recovery plans, conducting a business impact analysis, and developing a training and exercise program.

Disaster Recovery Program Management, Colorado Department of Transportation (CDOT), CO. AECOM provided post-disaster technical support and programmatic assistance following a devastating week of heavy rains, flooding, and landslides. AECOM staff deployed to support the CDOT recovery operation supplemented the Incident Command Structure (ICS) Planning, Logistics, Operations, and Finance/Administration positions. AECOM staff supported debris removal, transportation network repair, FEMA Public Assistance and FHWA Emergency Relief program management, and mitigation program support.

Private sector

Comprehensive Pandemic Flu Plan, Nationwide Retail Chain. AECOM led the development of a comprehensive pandemic flu plan, inclusive of industrial hygiene requirements, for a nationwide retail chain. We developed sets of internal triggers to augment the World Health Organization Phases and Federal Government Response Stages and hygiene parameters to mitigate the pandemic.

Contingency Planning and Emergency Response Services, Major pharmaceutical company. AECOM supported the development of contingency plans that would minimize the operational impacts of various types of emergencies at a major production facility. We evaluated existing plans and developed a strategy to incorporate risk assessment and benefit/cost analysis to prioritize preparedness initiatives and response capabilities.

Emergency Cleanup and Repairs, General Motors. After a tornado hit Oklahoma, AECOM provided emergency cleanup and repair services for the General Motors vehicle manufacturing plant. Our team of engineers and construction experts were on site within 24 hours initiating recovery surveys, debris cleanup, and other activities. Work was performed 24/7, reducing the impact of the damages.

Hurricane Sandy Rapid Building Repairs, Verizon, NY. AECOM responded within two hours of notification to provide repairs of building infrastructure including critical electrical, internal walls, HVAC, fuel pumps and other systems. AECOM oversaw emergency repairs across three key facilities in New York in response to damages that impacted more than 2,000 employees and disrupted service for over two million customers. AECOM responded within two hours to repair damaged Lower Manhattan Verizon facilities, which included the executive building on West Street and 104 Broad Street that houses switchgear to support Stock Exchange trading floors. We provided similar response and recovery services at the Verizon Belle Harbor facility in Queens, New York.



Mitigation

We focus on building stronger communities to mitigate the impact of future disasters. We help our clients evaluate lessons learned and apply mitigation strategies to become more resilient.

- Climate adaptation
- Coastal protection
- Economic development
- Environmental restoration
- Geospatial services
- · Grants management
- Hazard identification and risk assessment
- Hazard mitigation
- Improving construction and building codes
- Infrastructure / equipment hardening
- Master planning
- Supporting improved mission planning
- Transportation system protection
- Watershed and ecosystem management



Preparedness

We work with government agencies and communities to make preparations and develop plans of action to successfully manage and execute response and recovery activities.

- Continuity of government planning
- Continuity of operations planning
- Critical infrastructure hardening
- Evacuation plans
- Exercises
- Facility assessment and retrofit design
- Master planning
- Mission contingency planning
- Prepositioned stock management
- Recovery plans
- Risk assessment, management, and mitigation
- Training
- Warning system planning and installation



Response

We quickly mobilize resources to respond during and immediately following an event. We put emergency plans and training into action to save lives and prevent further property damage from hazardous conditions.

- Design of rapid facility improvements
- Equipment and asset relocation and secure-inplace
- Evacuation and shelter operations
- Humanitarian and feeding missions
- Evaluation and design of building systems improvements (HVAC, IT, etc.)
- Risk assessment
- Risk communication
- Staff, equipment, and supply mobilization
- Temporary housing
- Administrative or technical staff augmentation (engineering, environmental, planning, Emergency Operations Center, project and program management, construction management)



Recovery

We repair and restore impacted communities by helping to expedite a return to normal daily life. We're typically on the ground performing these missions within 24 hours of an event and continue to support the recovery and rebuilding process for months, or even years, afterwards.

- Business transformation strategy for future preparedness
- Damage assessments
- Debris management
- Design and reconstruction
- Equipment repair and replacement
- Grant management and assistance
- Housing recovery
- Infrastructure recovery
- Insurance evaluations
- Interim housing and infrastructure
- Mission objective and scheduling adjustment
- Program management and construction management
- Short- and long-term recovery planning / economic modeling

FEMA Community Lifelines we support













