

AECOM's Climate Adaptation Practice - Delivering Sustainable Legacies



Purpose

The climate is changing. The intensity and frequency of natural disasters has led to concerns about how prepared the public and private sectors are for an event. Storms like Hurricane Idalia and Tropical Storm Hilary, floods, droughts, and wildfires are subjecting population centers to more risk. Climate change is already having an impact throughout the Americas and is expected to continue into the foreseeable future. Changes in temperature, precipitation and sea level, however, are not uniform – there is great variability in what climate change will mean depending on location. Determining

the regional and local effects of global climate change is critical to assessing vulnerability and risk, which is necessary information in order to create implementable strategies. **Climate change is a long-term challenge with immediate needs; how we define the problem and present the solutions is critical in gaining public and stakeholder buy-in, political support, and necessary financing.** AECOM offers the multi-disciplinary services and experience needed to help adapt to climate change and enhance resilience to extreme weather.

Services

- **NATURAL DISASTER PREPAREDNESS REVIEW:** Using the *AECOM Disaster Resilience Scorecard for Cities*, develop a baseline of where your company or city is with regard to disaster preparation, response and recovery based upon the United Nations *Ten Essentials for Disaster Risk Reduction*.
- **VULNERABILITY ANALYSIS:** Identify exposures that exist now and in the future as a result of climate change, and how to mitigate and manage these risks. Vulnerabilities should be determined for the main organization, as well as for dependencies, such as utilities, and supply chains.
- **RESILIENT INFRASTRUCTURE DESIGN/BUILD:** AECOM has experience developing building codes and standards that consider sea level rise and other changing conditions to reduce future vulnerabilities to climate change. We design and implement improvements, including engineered, nature-based, and hybrid solutions to save lives, and reduce capital losses, while providing broader environmental, social, and economic co-benefits, creating more resilient communities to meet current and future challenges.
- **BUSINESS CONTINUITY PLANNING/PLAN UPDATE:** Plans need to be reviewed and updated to consider trends of the last 20 years as well as future projections, considering climate change, land use change, and other changing conditions. AECOM supports the development of robust continuity plans that lead to future risk reduction on assets, operations, supply chains and overall mission.
- **CLIMATE ADAPTATION PLANNING:** For events that cannot be mitigated, options exist to lessen the impact and adapt. AECOM supports planning for a future that considers and incorporates the potential effects of sea level rise, including catastrophic storm events, warming temperatures, and other changes.
- **DISASTER RECOVERY:** AECOM supports organizations and governments dealing with the aftermath of extreme weather events through emergency response contracts with FEMA and other federal, state and local agencies. We offer design and program management of major repairs and reconstruction efforts.
- **GREEN HOUSE GAS (GHS) REDUCTIONS:** AECOM can also help set and meet GHG emission reduction targets, through inventory, identifying reduction strategies, and implementation. AECOM's ScopeX process measures project embodied carbon and operational baselines, and models reductions in the engineering and environmental solutions we deliver to clients.
- **LOW-CARBON TRANSITION AND ENERGY RESILIENCE:** AECOM offers energy planning; energy efficient design and project development; control strategy optimization; generation and storage; implementation of renewable energy projects and grid optimization; community engagement; and financing to improve strategic energy portfolio planning, design, and delivery.



AECOM supported the Texas Coastal Resiliency Master Plan updates and developed a methodology to allow for better funding and promotion of NbS projects to the state's legislature through improved ecosystem services valuations of hazard mitigation projects.

Fulfilled the requirements of Executive Order 569 by developing a climate adaptation plan that outlines a statewide strategy to address climate change impacts through adaptation and resiliency measures and policies.

AECOM developed a Climate Adaptation Plan for the City of Naples, FL, which documented the City's proposed approach to address potential impacts posed by climate hazards. The Climate Adaptation Plan will help the City prioritize adaptation strategies, land use decisions, and investments to protect the City's built and natural infrastructure.

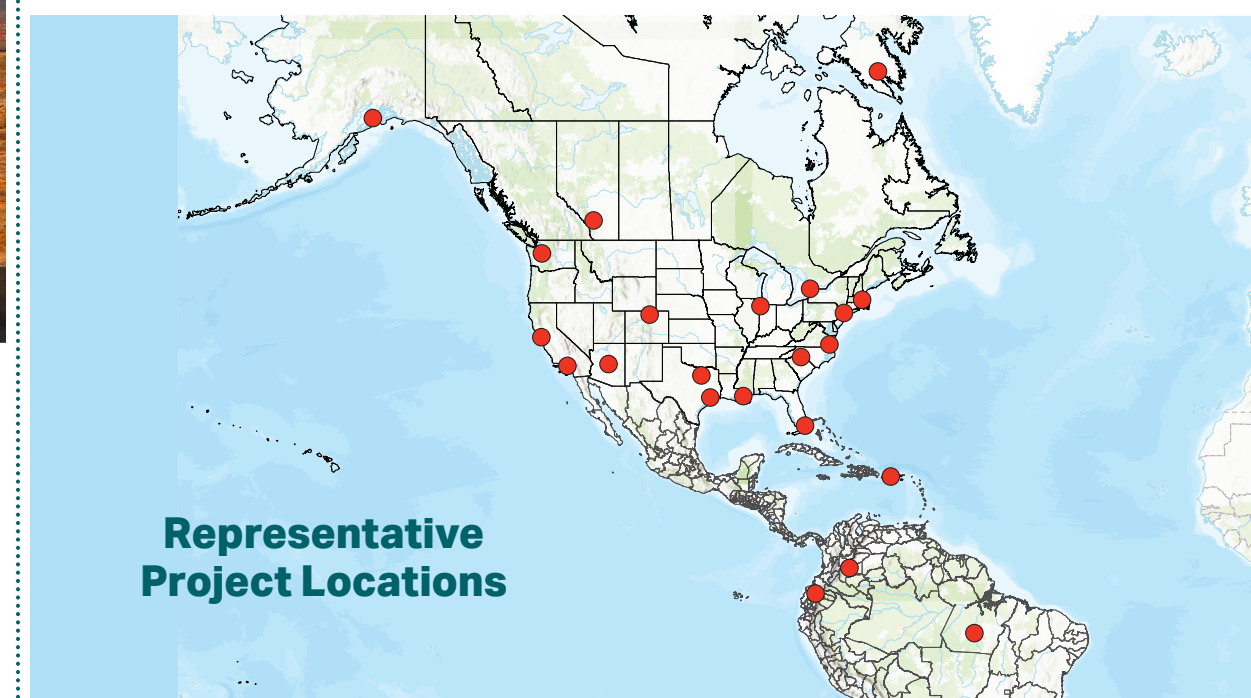
Technical Practice Group (TPG) for Climate Change & Resilience

AECOM's TPG is a global platform for those working in climate change, climate action planning, climate finance and adaptation to share emerging science, technologies, and policies; experiences, qualifications, technical expertise and lessons learned. We share available tools and procedures across geographies to conduct climate change projects and leverage expertise of our global experts to solve client problems.



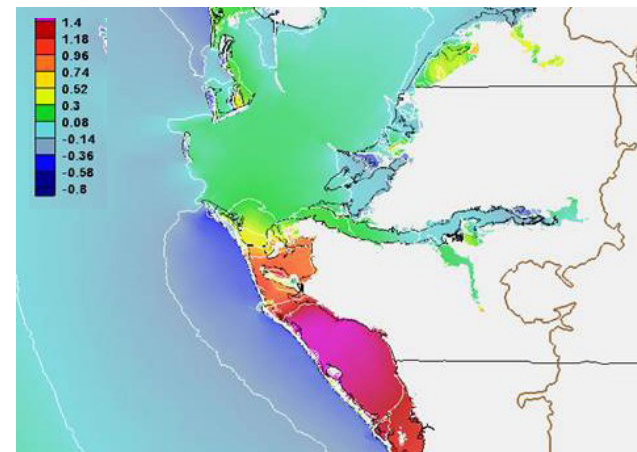
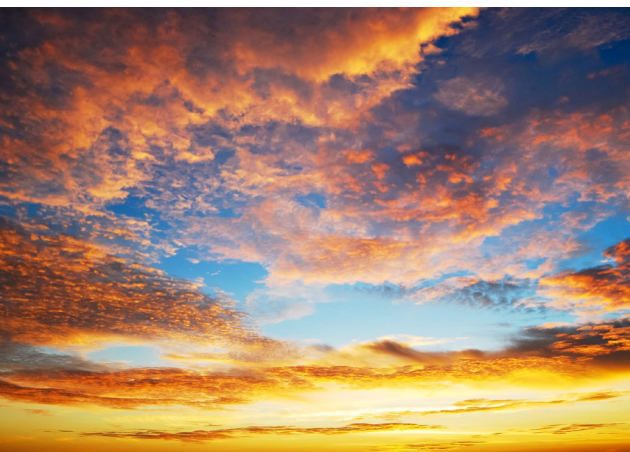
AECOM is producing a Climate Risk Management Plan for a high tech manufacturer, which includes an assessment of climate risk at a portfolio of key facilities. In addition to identifying site vulnerabilities and potential impacts and risks to operations, the assessment will detail specific recommendations for adaptation actions that can be taken at the corporate and facility levels.

AECOM developed a water resilience assessment for a confidential energy utility company. AECOM assessed the current and potential future availability of water resources across the client's service and major supply chain areas under a variety of potential climate change scenarios. The final report focused on how changes in temperature and precipitation as a result of climate change may influence water resources and water availability.



FOR MORE INFORMATION
Email us at askenvironment@aecom.com

Representative Project Locations



Value Added Benefits

- Global Experience Providing Over 400 Climate Adaptation and Resilience Projects Worldwide
- Unparalleled Technical and Public Sector Expertise
 - Top ENR Ranking/Sectors Nationwide, including Number 1 Environmental Science and Number 2 Green Design Firm (2023)
- Ability to Leverage Global Expertise and Experience to Provide Best Practices on Local Projects
- Customized Solution to Client Needs
 - Use of Climate Science, Economics, Engineering, etc.
 - Outputs Conducive to Decision Making & Implementation
- Integrated Offering
 - Hazard Identification – Planning – Design – Implementation – Permitting – Construction

Unique Differentiators

- Staff mix of engineers, planners, scientists that address climate adaptation and disaster resilience needs holistically. Our experience/expertise covers the full range of climate change services.
- Excellence in hazard modeling and analysis, including coastal and riverine flooding.
- Extensive building engineering expertise qualifies us to mitigate the effects of natural disasters and to set a framework for effective climate adaptation management.
- Wide array of experience in applying climate adaptation considerations across private and public sector operations, assets, and planning.
- Proven expertise working with 100 Resilient Cities, C40, CDP, the UN, the World Bank and others in developing and implementing climate change mitigation, adaptation, and resilience services.
- Extensive experience with community engagement and stakeholder outreach, and leading inclusive workshops on climate resilience.

Climate Change Business Journal Awards*

- **2023** - Net Zero Carbon Roadmap for South Western Railroad
- **2023** - Advancing Best Practices: Clean Distributed Generation & Energy Storage Port of Long Beach
- **2022** - Project Merit: New London State Pier Heavy-lift Marine Terminal
- **2022** - Project Merit: Bureau of Ocean Management Hydrogen Study
- **2022** - Project Merit: Green Hydrogen and Ammonia Production Facility
- **2022** - Project Merit: Resilient Reefs Initiative
- **2022** - Project Merit: Greater Toronto Airport Environmental Master Plan
- **2022** - Industry Leadership: Argonne National Lab Decarbonization Roadmap

Tools and Resources

- **Disaster Resilience Scorecard** – a unique tool designed by AECOM and IBM, and adopted by the UNISDR, to support client understanding, vulnerability and/or risk, as well as serve as a basis for stakeholder engagement and adaptation/strategic planning.
- **Forecasting Local Extremes (FLEx) Tool** – Developed to efficiently manage large downscaled climate model datasets, the tool can quickly and efficiently condense these data to a few key statistics that guide the analysis of local climate projections. Combined with the expertise of planners and engineers, the FLEx Tool has proven to be a cost-effective yet powerful means of facilitating comprehensive local and regional planning initiatives.
- **Climate Action for Urban Sustainability (CURB)** is a carbon abatement planning tool AECOM developed for the World Bank, Bloomberg Philanthropies, and C40 (Cities Climate Leadership Group) – a tool to benchmark successes with an internationally recognized program.
- **Sustainable Systems Integration Model (SSIM)**, AECOM's GIS-based land use spatial planning tool quantifies and compares a range of sustainability and climate change parameters for a masterplan.
- **Adapting to Climate Change Application (ACCA)** is AECOM's tool used on buildings, transportation, water, energy, environmental and waste projects to identify potential future impacts of climate change on assets and operations and helps to find ways to effectively respond and adapt to these impacts.
- **Mobilitics™** – a web-based predictive tool developed by AECOM to assess impacts of emerging technologies and behavioral trends that are transforming mobility and re-shaping the future of our cities through economics, vehicle emissions, mode share and transit usage, and development.
- **Economic Framework** for the Analysis of Climate Change Adaptation Options.
- **All hazard modeling, analysis, and mapping** including sea level rise, coastal and riverine flooding, drought and wildfire.
- **Riverine modeling and analysis** considering climate change projections.
- **Becoming Climate Resilient** - Guidebook for Executive Businesses.
- **Silicon Valley 2.0** – Regional study to minimize the anticipated impacts of climate change and reduce the generation of local greenhouse gas emissions. Led to the development of an online tool that allows users to conduct climate risk assessments, adaptation and resilience planning.
- **3D Visualization** – Over 25 years of 3D modeling/rendering experience. Our visualization staff creates and delivers photorealistic renderings, 3D computer animations, and virtual reality tools for use as design aides and public outreach materials. These tools can help a client envision the future of climate change impacts, such as sea level rise, with and without recommended changes.

About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle – from advisory, planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy, and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical and digital expertise, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a Fortune 500 firm and its Professional Services business had revenue of \$14.4 billion in fiscal year 2023. See how we are delivering sustainable legacies for generations to come at aecom.com and [@AECOM](https://twitter.com/AECOM).



*Awarded spring of following year