

Climate change adaptation and mitigation

Our extensive experience on global climate change adaptation and mitigation strategies encompasses a wide range of contracts, covering diverse assignments that have focused on vulnerability assessment and risk management tools for climate change; drinking water quality impacts of extreme weather-related events; analysis of changes in water use under regional climate change scenarios; analysis of reservoir operations under climate change; and population growth effects on sewer and wastewater systems.





1. 2005-2013 GHG Inventories and Development of GHG Action Plan, WSSC, Laurel, MD

Developed baseline GHG inventory and all subsequent year inventories for WSSC's entire operations. Developed GHG Action Plan.

2. State-of-the-Art Nitrogen Upgrade Program (SANUP), Alexandria Renew Enterprises (ARenew), Alexandria, VA ENR process upgrade included robust sustainability plan, GHG tool/inventory.

3. Storm Sewer Capacity Analysis, City of Alexandria, VA

Reviewed drainage design criteria, developed projections of future rainfall and sea level rise, performed review of aging infrastructure to analyze storm sewer capacity issues, identify problem areas, develop and prioritize solutions, and provide support for public outreach and education.

4. Confronting Climate Change and Population Growth Effects on NYC Sewer and Wastewater Systems, NYCDEP, NY

Developed and executed a plan to study and address pressures on NYC's wastewater infrastructure, including population growth, global climate change, and sea level rise. Assisted in development of an adaptation and optimization strategy.

5. Wastewater and Storm Drainage Facilities Plan, Boston Water and Sewer Commission, Boston, MA

Developed facility plans for the City's sewer and storm drain systems that are aligned with the Commission's long-term service goals and supported by effective operations, maintenance, and engineering practices, Development and evaluation of climate change adaptation strategies for changing wet weather conditions, sea level rise, and storm surge scenarios.

6. EPA Wilmington Community Resilience Pilot Project, Wilmington, NC

Supported community resilience project designed to identify potential risks to critical infrastructure posed by sea level rise (SLR) and more intense coastal storms, and in identifying land use and infrastructure policy options that reduce exposure and vulnerability of infrastructure to SLR.

7. Mission Support Contracts I & II, USEPA, Water Security Division, Washington, DC

Developed climate change related tools, documentation and training materials for EPA's Climate Ready Water Utilities initiative and EPA's information resources to support drinking water and wastewater utility preparedness, response and recovery. Participated in the development of EPA's CREAT by serving as a test case in 2011 for a collection system and wastewater utility application. Participating in hands-on resilience risk assessment working sessions in over 20 locations across the U.S. to enable municipalities to develop comprehensive water resiliency plans.

8. Ocean Outfall Legislation (OOL) Program, Miami-Dade County Water & Sewer Dept, FL

Serving as program manager overseeing infrastructure design, construction, and commissioning; monitoring and confirming regulatory compliance; engaging stakeholders. Developing design criteria to protect facilities from sea level rise, increasing rainfall intensity, and storm surge. This \$3.3 billion program involves implementing 28 projects over an 11-year period.

About CH2M

Headquartered near Denver, Colorado, USA, employee-owned CH2M is a global leader in consulting, design, design-build, operations and program management for government, civil, industrial and energy clients. The firm's work is concentrated in the areas of water, transportation, environment, nuclear, energy, facilities and urban environments. With US\$5.4 billion in revenue and 25,000 employees, CH2M is an industry-leading program management, construction management and design firm, as ranked by *Engineering News-Record* and named a leader in sustainable engineering by Verdantix.

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9. Storm Sewer Capacity Analysis, Jefferson County MSD, Louisville, KY

Evaluated local and regional climate data and summarized available climate change projections to assist MSD in wet weather facilities planning.

10. Colorado River Basin Study, U.S. Department of the Interior, Bureau of Reclamation, Lower Colorado Regional Office

Led consultant team to support the supply and demand assessments including climate change; coordinated with federal agencies, states, nongovernmental organizations and tribes; evaluated future water management actions; and prepared a strategic roadmap for management of the basin resources.

11. Climate Assessment Workplan, Sonoma County Water Agency, CA

Developed evaluation of climate science and projections to identify potential threats to water supply, flood control, and sanitation infrastructure.

12. Strategic System-Wide Vulnerability Assessment to Prioritize Critical Infrastructure based on Potential Climate Change Impacts – Phase II, City of Los Angeles Bureau of Sanitation

Performed a strategic system-wide vulnerability assessment to prioritize critical systems and infrastructure that is at greatest risk to climate variability and change based on a risk-based screening level approach.

Contact us

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OVERSEAS LOCATIONS

13. Dŵr Cymru Welsh Water, Pentwyn Road, Nelson Treharris

Conducted flood and coastal erosion risk assessments for key non-infrastructure assets, consistent with industry resilience planning best practice guidance, and to assist in the review and development of the resilience strategy.

14. Yorkshire Water Flood Resilience Planning, Yorkshire Water, United Kingdom

Developed a planning methodology that supports delivery of an iterative resilience planning process and a comprehensive resilience assessment of Yorkshire Water's vulnerable assets.

15. London Tideway Tunnels Program Management Services, Thames Water Utilities Limited, London

Working as program manager with Thames Water, the UK's largest water company, to develop and deliver the London Tideway Tunnels. Two major new tunnels are needed to substantially reduce the volume of untreated sewage overflowing from London's Victorian sewers into the River Thames—estimated to be approximately 39 million cubic meters a year.

16. Active, Beautiful, Clean Waters Program Central Catchment Master Plan, Singapore

Developed a Master Plan with seamless integration between traditional engineering, landscape architecture, and ecology. This vision was completed by re-envisioning storm water channels as recreational spaces with thriving biodiversity amidst a lush landscape.

17. United Kingdom Highways Agency for Flood Risk Management

The UK Highways Agency needed to improve the resilience of the motorway and trunk road network to the increased risk of incidents caused by severe weather such as flooding and heavy snowfall. CH2M delivered a report summarizing the options for water provision and communications in the event of extreme events. As a result, the Highways Agency is able to build resilience to future extreme weather into facilities and improve communications to the traveling public.

