



News Release

CH2M Denver, U.S.
9191 S. Jamaica St.
Englewood, CO 80112
www.ch2m.com



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Contact: Marie Gettel-Gilmartin
Sustainability Marketing & Communications Manager
Phone: 503-736-4254
marie.gettel-gilmartin@ch2m.com

Study Citing Natural Infrastructure as Effective for Climate-related Flooding Wins American Council of Engineering New York Diamond Award

DENVER, Apr. 19, 2016—It turns out that the best way to fight Mother Nature's fury rests with nature herself. According to a recent, award-winning study conducted by The Nature Conservancy and CH2M in the wake of Hurricane Sandy, incorporating nature-based defenses into traditional infrastructure solutions provides the most effective protection against climate-related flooding.

Hurricane Sandy's storm surge caused more than \$19 billion in damages in New York City. In the city's Special Initiative for Rebuilding and Resiliency, planners requested a case study for one of the lowest-lying, vulnerable areas of Queens, to evaluate the role of nature and nature-based infrastructure in protecting communities from some of the impacts of climate change.

The Howard Beach Flood Risk Reduction Study and the resulting Urban Coastal Resilience Report found that a building-by-building elevation approach is not the most cost-effective way to tackle flooding challenges. Among a variety of alternatives examined, a neighborhood-wide hybrid approach combining both nature-based features and human-made solutions proved most effective in protecting coastal areas from storm flooding. In conjunction with sea walls and flood gates, natural infrastructure such as wetlands, marshes, mussel beds, dunes and native vegetation were found to be cost-effective in reducing the ingress of flood waters and minimizing erosion. They also enhance habitat quality, improve aesthetics and add economic value. The Nature Conservancy and CH2M included an innovative cost-benefit analysis for investment in natural solutions to quantify economic returns in terms of risk reduction, ecosystem improvements and enhanced property values.

The study, which received a 2016 American Council of Engineering (ACEC) New York Diamond Award, makes a convincing case for investment in natural infrastructure to enhance coastal resilience and quality of life. CH2M, which developed engineering models with detailed coastal and flooding scenarios, also worked with Tetra Tech to develop a comprehensive economic analysis. The analysis goes beyond conventional assessments, which identify costs to protect assets from flooding, to include the economic value generated by natural assets.

The study provides another reason for greater reliance on nature-based infrastructure. More and more companies are adopting this approach, as described in the Natural Infrastructure for Business guide (NI4Biz.org), released by the World Business Council for Sustainable Development (WBCSD), CH2M, and The Nature Conservancy. Supported



by case studies from Dow Chemical, Royal Dutch Shell and other leading companies, the NI4Biz guide documents the cost savings and effectiveness of incorporating nature-based solutions to infrastructure and provides decision tools to assist companies in realizing the benefits for their own operations.

About The Nature Conservancy

The Nature Conservancy is a leading conservation organization working around the world to protect ecologically important lands and waters for nature and people. The Conservancy and its more than 1 million members have protected nearly 120 million acres worldwide. Visit us on the web at nature.org.

About CH2M

CH2M is the leading professional services firm delivering sustainable solutions to clients working on the world's most complex challenges. CH2Mers make a positive difference providing consulting, design, engineering and management solutions for vital infrastructure and resources serving diverse public- and private-sector clients. With \$5.4 billion in revenue and ~24,000 people, the firm has offices in 50 countries and four business groups: water; environment & nuclear; transportation; and energy & industrial. Known for managing global events such as the Olympic Games, CH2M ranks among Ethisphere's World's Most Ethical Companies; number-one in environmental consulting and program management by Engineering News-Record; and among sustainability leaders by independent analyst Verdantix. CH2M in 2016 was selected to receive the World Environment Center's Gold Medal Award for International Corporate Achievement in Sustainable Development, and in 2015, received the Stockholm International Water Institute's highest Industry Water Award for pioneering water conservation and reuse technologies. To learn more about the CH2M difference, connect with the firm at www.ch2m.com; [linkedin.com/company/ch2m](https://www.linkedin.com/company/ch2m); twitter.com/ch2m; facebook.com/ch2mhill; and search for jobs at ch2m.com/careers.