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**NEW STUDY FINDS BLUE-GREEN INFRASTRUCTURE IN NEW YORK CITY WOULD
GENERATE \$2 RETURN ON EVERY \$1 INVESTED**

New York City - Just two weeks after massive flooding in New York City closed schools, halted subways and left the City at a standstill, Rebuild by Design and Ramboll released "Blue-Green Infrastructure: A business case for New York City." The report finds that for every \$1 invested in a Blue-Green Infrastructure Network designed to the 10-year storm in 2050, New York City makes \$2.09 in return, and that up to 82% of NYC has a positive business case of managing stormwater with blue and green solutions.

Heavy rain, as was experienced on September 29th, is expected to increase with climate change. The New York City Panel on Climate Change (NPCC) anticipates that by the end of the century, the city could experience as much as 25% more annual rainfall than today, and a 50% increase in the number of days with more than one inch of rain.¹ Events like these will continue to place pressure on an already outdated sewer system in NYC. To address this challenge, blue-green infrastructure can be deployed across New York City to lower risks while bringing social, ecological, and health benefits.

"Investing in mother nature is a win-win against climate change," **said Amy Chester, Managing Director of Rebuild by Design**, "The more the City transforms from a concrete jungle to a sponge, the more New Yorkers can stay safe and dry during heavy rainfall."

Ramboll conducted a city-wide flood and climate-risk modeling for current and future climate conditions. Using representative case areas across all five boroughs, blue-green infrastructure master plans have been developed and upscaled city-wide. A Benefit-Cost Analysis (BCA) has been performed, incorporating costs, reduced damages, and added socio-economic value to illustrate the feasibility of these factors across all of New York City. The report looked at deploying blue-green infrastructure in five New York City Neighborhoods (one in each borough) and then used spatial upscaling to get a clear understanding of how deployment of national solutions could benefit the whole city.

¹ Mayor's Office of Resiliency, "NYC Stormwater Resilience Plan", May 2021.

"Cities from Copenhagen to Hoboken are increasingly turning to blue-green infrastructure measures to capture every drop of rainfall possible and slowly convey the water to the sewers, buying time for them to catch up to the intensity of the storm," **said Christian Nyerup Nielsen, Global Division Director for Water Infrastructure and Climate Adaptation for Ramboll.** "If New York City were to do the same, a storm like we just had would have far less damage than we experienced."

Blue-green infrastructure are stormwater management practices that connect urban hydrological functions (blue) with vegetation systems (green) and community priorities (multi-functional). Blue-green infrastructure offers valuable solutions for urban areas facing the challenges of climate change and reduces the need for traditional gray infrastructure, such as expanding sewers which is costly and disruptive. Multi-functional blue-green infrastructure, co-designed with communities, generates social, economic, and environmental values and can improve air quality, traffic safety, and biodiversity, while creating recreational value, opportunities for physical activity, and lower temperatures during heat waves.

Additional report findings include:

- By implementing blue-green infrastructure in NYC, DEP will save 20% on upgrading existing sewers to future service level.
- Up to 82% of NYC has a positive business case of managing stormwater with blue-green infrastructure.
- 151,000 new trees could be planted in New York City with a positive Blue-Green Infrastructure business case.
- City-wide Blue-Green Infrastructure is feasible up to a future 50-year design storm in NYC.
- Blue-Green Infrastructure in NYC is most feasible when implemented in parks, plazas, and public housing.
- Co-benefits are essential to the business case of Blue-Green Infrastructure in NYC.

This work builds on research and analysis conducted by Rebuild by Design and One Architecture and Urbanism "[Toward a Rainproof NYC: Turning the Concrete Jungle into a Sponge](#)," which demonstrated how the city could adapt to increasing water through systematically applying blue-green multi-benefit solutions, while creating co-benefits – such as cleaning our air and water and improving physical and mental health – to New Yorkers' lives every day, and the "[Cloudburst Resiliency Planning Study](#)" published by NYC Department of Environmental Protection in 2017, prepared by Ramboll.

About Rebuild by Design **www.rebuildbydesign.org**

As the world faces rising populations, mass migration, climate change, social injustices, and economic challenges, communities can't afford to wait until after the next crisis to plan for the future. Through regional competitions, local engagements, research and policy, Rebuild by

Design is reimagining the way communities find solutions for today's large-scale, complex problems by creating collaborations across communities and governments.

Rebuild convenes global expertise, with regional leadership, and community stakeholders to gain a better understanding of how overlapping environmental and human-made vulnerabilities leave communities at risk. Rebuild's core belief is that through collaboration our communities can grow stronger and better prepared to stand up to whatever challenges tomorrow brings.

About Ramboll

www.ramboll.com

Ramboll is a global architecture, engineering and consultancy company founded in Denmark in 1945. Our 17,500 experts create sustainable solutions across Buildings, Transport, Energy, Environment & Health, Water, Management Consulting and Architecture & Landscape.

Across the world, Ramboll combines local experience with a global knowledge base to create sustainable cities and societies. We combine insights with the power to drive positive change for our clients, in the form of ideas that can be realized and implemented.

We call it: Bright ideas. Sustainable change.