



NEW YORK STATE SENATOR

Thomas K. Duane

## Submitting Testimony to Protect New York City's Vulnerable Waterfronts

THOMAS K. DUANE December 13, 2010

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Comments by New York State Senator Thomas K. Duane and  
New York State Assembly Member Richard N. Gottfried  
Regarding the New York State Sea Level Rise Task Force  
Draft Report to the New York State Legislature

December 12, 2010

We are Thomas K. Duane, representing New York State's 29th Senate District, which includes Manhattan's Hudson River waterfront from Vestry to West 70th Street and its East River waterfront from 14th to 30th Streets; and Richard N. Gottfried, representing New York State's 75th Assembly District, which includes Manhattan's Hudson River waterfront from West 14th to 59th Streets. The findings and recommendations of the [Draft Report to the New York State Legislature](#) ("the Draft Report") prepared by the New York State Sea Level Rise Task Force ("the Task Force") are of utmost importance to us and many of our constituents since significant portions of our districts lie just above sea level and are therefore at risk from rising sea levels and storm surges. We applaud the Task Force's detailed and comprehensive Draft Report but regret that it omits specific recommendations to prevent flooding in New York City.

The Task Force was created by an act of the New York State Legislature in August 2007, which charged it with preparing a report that addresses the impending sea level rise, how it will affect coastal communities throughout New York State, and ways to protect coastal ecosystems, natural habitats and communities in the face of flooding.

The Draft Report notes that New York has seen increases in sea levels for at least a century and is known to be vulnerable to tropical storms, hurricanes and Nor'easters which produce storm surges. It further describes the devastating combined effects of these phenomena, which will continue to be exacerbated by global warming, including, among others, contamination of freshwater drinking supplies, elimination of ecosystems, disruption of transportation and communication networks, destruction of residential and commercial developments, and loss of shoreline, beaches, barrier islands and other geographical features.

In its recommendations for ameliorating and/or preventing the effects of flooding from sea level rise and storm surges, the Draft Report sensibly focuses on reinforcement of natural systems, proper urban planning and community empowerment, structural and non-structural protective measures and even relocation of inappropriate development, which are relatively low cost and limit destruction of human and natural systems. Such worthy, common-sense solutions are appropriate for many parts of New York State, but are not sufficient for much of New York City. Manhattan and waterfront Brooklyn and Queens in particular not only face a different and compounded set of effects from rising sea levels, but also their established human and infrastructure density and hard shorelines require unique preventive solutions.

When the Draft Report addresses New York City's unique challenges, it notes that shoreline protective structures – manmade structures such as jetties, bulkheads, dikes, rip rap and

seawalls designed to lessen or eliminate the erosive effect of waves on property or infrastructure – may be necessary to save crucial infrastructure and communities. Given this acknowledgment, storm-surge barriers, which are obstructions at the mouth of a tidal watercourse with adjustable gates that close during flood events or surges, deserve expansive study and consideration. The Draft Report briefly mentions them as an option yet, despite the fact that they are already employed in cities around the world, it does not include them explicitly in its recommendations.

Alternative ways to protect Manhattan and waterfront Brooklyn and Queens from mass flooding caused by sea level rise and storm surges are extraordinarily limited. The high density human population, infrastructure and enormous monetary and cultural value of existing buildings make adaptation to or mitigation of flooding impossible. Indeed, some experts and many residents of our districts see storm-surge barriers as possibly the only real means to avoid catastrophic damage from such flooding. We realize that the potential installation of storm-surge barriers will raise a host of ecological, financial, social justice and other concerns, and these should be investigated thoroughly by the appropriate city, state and federal agencies, but that should not preemptively preclude their examination.

The Sea Level Rise Task Force has done an admirable job in compiling its findings and recommendations in this Draft Report, and its work will help New York State better prepare itself for a future certain to hold increased sea levels and dangerous storm surges. In light of New York City's unique characteristics, however, we urge the Task Force to clearly state in its Final Report the need for immediate extensive study of the benefits and drawbacks of storm-surge barriers to protect this vital and densely populated portion of our State.