

**Attn:**

Gregory C. Graziano  
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**Filed Via Electronic Mail**

**RE: Water Authority of Great Neck North Storm Mitigation Improvements Project (DWSRF Project #18146) – Draft Negative Declaration**

Mr. Graziano:

The Sabin Center for Climate Change Law (“SCCCL”)<sup>1</sup> submits these comments to the Water Authority of Great Neck North (“WAGNN”) on WAGNN’s Draft Negative Declaration for its Storm Mitigation Improvements Project (the “Project”). SCCCL focuses on a critical issue not identified in WAGNN’s environmental assessment documents – the need to prepare our water supply systems for future climate change impacts. Specifically, sea level rise, and an associated increase in flooding and storm surges, may pose significant risks to WAGNN’s ability to provide water supply services.

SCCCL commends WAGNN’s efforts to anticipate the impacts of severe weather events on its water supply infrastructure and to take action to prepare for such events. WAGNN’s proposal to elevate public water supply wellheads will help ensure its ability to provide proper water pressure and firefighting capabilities during storms causing flooding and prolonged outages on the Great Neck peninsula.

To reap the greatest benefits from the Project, SCCCL recommends that WAGNN account for projected climate change impacts when determining the height at which to elevate each wellhead. As oceans absorb heat and as glaciers and ice sheets melt, global sea levels are rising at increasing rates.<sup>2</sup> In the next several decades, storm surges and high tides will combine with sea level rise and, in some locations, land subsidence to increase flooding in many regions, threatening the communities and industries along our coastlines.<sup>3</sup>

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<sup>1</sup> The Sabin Center for Climate Change Law at Columbia Law School develops legal techniques to fight climate change, trains law students and lawyers in their use, and provides the public with up-to-date resources on key topics in climate law and regulation. SCCCL works closely with the scientists at Columbia University’s Earth Institute and with governmental, nongovernmental, and academic organizations. See <http://web.law.columbia.edu/climate-change>. Please contact SCCCL for assistance locating any sources.

<sup>2</sup> Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, Eds., 2014: Climate Change Impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program, 841 pp. doi:10.7930/J0Z31WJ2 [hereinafter “National Climate Assessment”], p. 44, available at <http://nca2014.globalchange.gov>.

<sup>3</sup> National Climate Assessment, p. 45; Gordon, Kate, 2014: Risky Business: The Economic Risks of Climate Change in the United States. The Risky Business Project [hereinafter “Risky Business”], p. 20.

State law supports consideration of future climate change related impacts in the implementation of WAGNN's Project. Notably, Governor Cuomo recently signed the "Community Risk Reduction and Resiliency Act" ("CRRA"), a landmark adaptation bill that amends certain state statutes to reflect greater awareness of and preparedness for climate change-associated risks.<sup>4</sup> The CRRA requires state agencies to consider future physical climate risks caused by storm surges, sea level rise, or flooding in certain permitting, funding, and regulatory decisions.<sup>5</sup> The CRRA amends the Smart Growth Public Infrastructure Policy Act ("Smart Growth Act") to require state agencies to ensure that public infrastructure projects are consistent with the goal of "mitigat[ing] future physical climate risk due to sea level rise, and/or storm surges and/or flooding, based on available data predicting the likelihood of future extreme weather events, including hazard risk analysis data if applicable."<sup>6</sup>

CRRA requires the New York State Department of Environmental Conservation ("NYDEC") to adopt official sea level rise projections by January 1, 2016.<sup>7</sup> Meanwhile, many sources provide current and credible data regarding sea level rise and its potential consequences.<sup>8</sup> Most recently, a 2014 Report released by the New York State Energy Research and Development Authority indicates that sea level rise in Long Island is expected to increase by as much as 72 inches by 2100.<sup>9</sup> Using these and other sources, WAGNN should assess the projected range of sea level rise and storm surge throughout the life of its water supply infrastructure and determine whether the Project will elevate the wellheads to sufficient heights. To avoid underestimating these risks, WAGNN should base its determination on the high end of the projected sea level rise range. Moreover, WAGNN should exhibit a low tolerance for risk in light of the importance of the water supply for firefighting and residential uses.

Further, to adequately protect water supply infrastructure from future climate change impacts, WAGNN should consider the risks of more frequent and severe flooding. These risks are not fully reflected by static sea level rise data. Increasingly intense storm surges are a foreseeable risk on the coast of Long Island, and should be considered in connection with the Project. Particularly relevant is the 2014 National Climate Assessment's observation that a sea

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<sup>4</sup> 2014 Sess. Law News of N.Y. Ch. 355 (S. 6617-B).

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*; N.Y. Env'tl. Conserv. Law § 6-0107.

<sup>7</sup> *Id.*; N.Y. Env'tl. Conserv. Law § 3-0319.

<sup>8</sup> *See e.g.*, Intergovernmental Panel on Climate Change ("IPCC"), Chapter 2.2.3 Ocean, cryosphere and sea level. In Climate Change 2014 Synthesis Report, Fifth Assessment Report, pp. SYR-22 – SYR-23, *available at* [http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_LONGERREPORT.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_LONGERREPORT.pdf); National Climate Assessment, pp. 44-45, 371-95; Climate Central, *Surging Seas: Sea Level Rise Analysis*, *available at* <http://sealevel.climatecentral.org>; Climate Central, *Sea level rise and coastal flood risk: Summary for Nassau County, NY*, *available at* [http://ssrf.climatecentral.org.s3-website-us-east-1.amazonaws.com/Buffer2/states/NY/downloads/pdf\\_reports/County/NY\\_Nassau\\_County-report.pdf](http://ssrf.climatecentral.org.s3-website-us-east-1.amazonaws.com/Buffer2/states/NY/downloads/pdf_reports/County/NY_Nassau_County-report.pdf); Risky Business, *supra* note 3; Metropolitan East Coast Assessment, *Assessment Report: Coasts (2000)*, *available at* [http://metroeast\\_climate.ciesin.columbia.edu/reports/coasts.pdf](http://metroeast_climate.ciesin.columbia.edu/reports/coasts.pdf).

<sup>9</sup> Horton, R., D. Bader, C. Rosenzweig, A. DeGaetano, and W. Solecki. 2014. *Climate Change in New York State: Updating the 2011 ClimAID Climate Risk Information*. New York State Energy Research and Development Authority (NYSERDA), Albany, New York, at 10, *available at* <http://www.nyserda.ny.gov/-/media/Files/Publications/Research/Environmental/ClimAID/2014-ClimAid-Report.pdf> (high estimate (90<sup>th</sup> percentile) projection for Montauk point).

level rise of two feet, without any changes in storms, would more than triple the frequency of dangerous coastal flooding throughout most of the Northeast.<sup>10</sup>

Finally, wellhead elevation heights should incorporate an additional margin of safety, known as “freeboard,” to account for unanticipated risk factors. The inclusion of freeboard in flood planning is intended to protect against risks that can contribute to flood heights, such as waves and the effect of development on ground water absorption.<sup>11</sup> These risks are separate from and additional to the risks of sea level rise and storm surge, and should be evaluated as such in connection with the Project.

In sum, sea level rise and increased flooding due to climate change pose a foreseeable risk to WAGNN’s operations due to the Project site’s coastal location. WAGNN should consider these impacts when implementing the Project to adequately protect its public water supply infrastructure from future climate change impacts.

Thank you for the opportunity to submit comments on WAGNN’s Draft Negative Declaration for its Storm Mitigation Improvements Project. Please feel free to contact SCCCL with any questions.

Sincerely,

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Enclosures:

Climate Central, Sea level rise and coastal flood risk: Summary for Nassau County, NY  
NYSERDA, Updating the 2011 ClimAid Climate Risk Information: Sea Level Rise Projections

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<sup>10</sup> *Id.*

<sup>11</sup> See New York City, N.Y., Rules, Tit. 1, § 3606-04 (citing FEMA’s definition of freeboard, 44 C.F.R. § 59.1); American Society of Civil Engineers, Highlights of ASCE 24-05 Flood Resistant Design and Construction (2010), available at <http://www.fema.gov/media-library/assets/documents/14983>; FEMA Hurricane Sandy Recovery Advisories RA2: Reducing Flood Effects in Critical Facilities (April 2013) and RA5: Designing For Flood Levels above the BFE After Hurricane Sandy (April 2013), available at <http://www.fema.gov/media-library/assets/documents/30966>.