

## State Environmental Regulation

## Expert Analysis

# DEC Begins to Prepare Draft Regulation on Sea-Level Rise

On Sept. 22, 2014, Governor Andrew Cuomo signed bill A06558/S06617-B, known as the Community Risk and Resiliency Act (CRRA). The purpose of this statute is to ensure that the effects of climate risk and extreme-weather events are taken into consideration when state agencies enact facility-siting regulations, grant permits, or provide funding for certain projects. The CRRA's provisions are to apply to applications and permits no later than Jan. 1, 2017.<sup>1</sup>

The CRRA requires the New York State Department of Environmental Conservation (DEC) to adopt a regulation no later than Jan. 1, 2016, that establishes "science-based" sea-level rise projections. These projections must be updated every five years.<sup>2</sup> In late June, the DEC held a series of public meetings across the state about sea-level rise estimates, extreme weather events, and climate risks. One purpose of these public meetings was to elicit comments from the public before the DEC drafts the proposed regulation. The DEC expects to propose the draft sea-level rise projections regulation for formal public comment later this year.<sup>3</sup>

Lawyers, clients, and other parties interested in construction, real estate development, land use, municipal regulation, climate change, and the marine coastal environment may want to provide comments to the sea-level rise draft regulation, once it is issued.

### The Problem

Scientists project that by the start of the next century, sea levels along New York's coastlines and estuaries likely will be 18 to 50 inches higher than they presently are. One New York State-funded research study suggests that sea levels could be as much as 75 inches higher than current levels. Even the lower range of these projections is alarming

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as New York's coastal marine counties are home to more than half of the state's citizens. Sea-level rise already is intensifying storm surges and flood events. Imagine the damage and disruption that will occur when sea levels are upwards of six feet higher than present conditions.<sup>4</sup>

Sea-level rise has been linked to thermal expansion of warming waters. The DEC estimates that sea levels rose at least a foot since 1900 due to

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thermal expansion. Scientists report that water from melting glaciers and land ice sheets is fast becoming a major factor in sea-level rise. Given the abundant supplies of land ice in the Arctic and Antarctic, this may become the factor in sea-level rise. Moreover, scientists report that the amount of greenhouse gases already trapped in the atmosphere will impact sea-level rise for centuries.<sup>5</sup> This does not take into account the impact of greenhouse gases that will be emitted and trapped in the future.

### The CRRA

The CRRA has five notable provisions relating to sea-level rise.<sup>6</sup> The first is the sea-level rise projections regulation required to be enacted by the DEC by Jan. 1, 2016. The other four provisions include the following.

First, the CRRA amends the Environmental Conservation Law (ECL), the Agriculture and Markets Law, and the Public Health Law to require applicants for certain permits or funding to demonstrate that future physical climate risk due to sea-level rise, storm surge, and flooding are considered. The amendments also incorporate consideration of these factors in certain facility-siting regulations.

The permit programs identified in the CRRA (all of which are managed by the DEC) include permits for oil and natural gas wells and major projects involving protection of water, sewerage service, liquefied natural gas and liquefied propane facilities, mined land reclamation, freshwater wetlands, tidal wetlands, and coastal erosion hazard areas. The facility-siting programs identified in the CRRA (all of which are managed by DEC) include hazardous waste transportation, storage, and distribution facilities; petroleum bulk storage; and hazardous substance bulk storage.

The funding programs identified in the CRRA include the Water Pollution Control Revolving Fund (managed by the DEC and the New York State Environmental Facilities Corporation (EFC)); the Drinking Water Revolving Fund (managed by the New York State Department of Health and the EFC); open space acquisition (managed by the DEC and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP)); open space project operation and maintenance agreements (managed by the OPRHP); landfill closure assistance and coastal rehabilitation assistance (managed by the DEC); local waterfront revitalization (managed by the New York State Department of State and agricultural and farmland protection (managed by the Department of Agriculture and Markets).

The CRRA gives the DEC the ability to consider storm surge and flooding when it is considering a permit application or a request for funding or when it is approving facility-siting. That grant of authority is not limited to coastal areas that are directly impacted by sea-level rise. Rather, the DEC can consider extreme weather events or flooding in

non-tidal communities across the state that have experienced flooding or storm surge or that are at risk for flooding or storm surge in permitting, funding, or facility-siting decisions.

Second, the CRRRA amends Article 6 of the ECL, which is the Smart Growth Public Infrastructure Policy Act. This amendment adds mitigation of risk due to sea-level rise, storm surge, and flooding to the list of smart-growth criteria.

Third, the CRRRA requires the State Department, in cooperation with the DEC, to develop model local laws on climate change. These laws will include consideration of future risk due to sea-level rise, storm surge, and flooding.

Fourth, the CRRRA requires the DEC, in consultation with the State Department, to develop guidance on the use of natural resources and natural processes to “enhance resiliency.”

### Projections Regulation

The regulation<sup>7</sup> the DEC must enact, science-based sea-level rise projections, will not by itself impose any regulatory requirements.<sup>8</sup> Rather, those projections will be used by decision-makers as a mechanism to consider the probability that sea-level rise levels will be exceeded and the consequences and costs of such exceedances.

The DEC identified two New York State-funded scientific studies that address sea-level rise projections, the ClimAID Report<sup>9</sup> and the RISE Report (Resilience Institute for Storms and Emergencies).<sup>10</sup> The ClimAID Report provides model-based projections of sea-level rise for three regions of the state for three intervals of time (2020s, 2050s, 2080s) and for 2100. The DEC notes that Part 490 could take advantage of these regional and time-specific projections and that providing a range of projections “would allow for the flexibility that will be needed during consideration of the relative criticality and functional life span of different projects.”<sup>11</sup> The ClimAID Report also provides regional projections based on three tide gauges. The DEC may adopt regionally specific projections based on the projections for these three tide gauges.

The RISE Report models sea-level rise for Montauk Point, in Suffolk County, and the Battery, in downtown New York City, and generates projections for portions of the Long Island coast by interpolating model results between Montauk Point and the Battery. Interestingly, the low and medium projections in the ClimAID Report and the RISE Report are comparable. The projections under high emissions scenarios are significantly different, with the RISE Report estimates being lower than the ClimAID estimates. For example, the RISE Report’s 95th percentile projection of 48 inches at the Battery by 2100 is significantly lower than the ClimAID Report’s 90th percentile projection of 75 inches.<sup>12</sup>

The DEC notes that because six feet of sea-level rise during the next century cannot be ruled out, and the dire consequences that amount of sea-level rise entails, its current intention is to base Part 490 on the ClimAID projections.<sup>13</sup> The DEC says that it considered several other factors in reaching its current intention, including the following: (1) the ClimAID Report, funded by the New York State Energy Research and Development Authority (NYSERDA), was conducted by the same research team that provided the New York City Panel on Climate Change projections, using the same peer-reviewed methodologies; (2) it would be less confusing for the public, planners, and the regulated community for the state to use projections based on methodologies that were consistent with those used by New York City; (3) ClimAID’s projections covered the entire tidal coast of the state; (4) ClimAID’s projection distribution (10th, 25th, 75th, and 90th percentiles) were more suitable for risk-based planning; (5) even using the more conservative projections found in the RISE Report,

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a sea-level rise of approximately six feet is predicted to occur within the next 150 years; (6) several ongoing phenomena (faster than expected disintegration of ice shelves on Greenland and Antarctica; faster than expected movements of interior ice toward the coasts of Greenland and Antarctica; and greater than expected sea-level rise that occurred during the last century) indicate that increasing dynamic ice movement could cause sea-level rise to exceed projections of the United Nations’ Intergovernmental Panel on Climate Change; and (7) ClimAID’s “unlikely but plausible projection” for 2100 provides a benchmark against which critical infrastructure and land-use change can be evaluated for low-probability/high-consequence events.<sup>14</sup>

### The Future

The DEC already has signaled that it intends to rely upon a state-funded scientific study as the foundation for its sea-level rise projections. Once these projections are incorporated into the regulation, and the regulation is promulgated, these projections must be considered by decision-makers in permit, funding, and facility-siting decisions. Interested parties need to participate in the process

now if they intend to be heard on sea-level rise regulation in New York.<sup>15</sup>

### Follow-Up

A brief follow-up on my prior column on the Brownfield Cleanup Program (BCP).<sup>16</sup> In mid-June, the DEC issued its proposed definitions for the terms “affordable housing project” and “underutilized.”<sup>17</sup> These terms will be used to determine whether a brownfield site located in New York City is eligible for tangible property tax credits. The “affordable housing project” definition also will be used statewide to determine eligibility for the 5 percent affordable housing tax credit bonus. Comments to these proposed definitions must be submitted by Aug. 5, 2015.<sup>18</sup>

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1. See, New York State Community Risk and Resiliency Act Summary (the CRRRA Summary), available at [http://www.dec.ny.gov/docs/administration\\_pdf/crrrasummary.pdf](http://www.dec.ny.gov/docs/administration_pdf/crrrasummary.pdf).

2. See, Summary for Stakeholders: 6 NYCRR Part 490, Projected Sea-level Rise, available at [http://www.dec.ny.gov/docs/administration\\_pdf/part490websummary.pdf](http://www.dec.ny.gov/docs/administration_pdf/part490websummary.pdf). Adoption of official sea-level rise projections also was a recommendation of the State Sea Level Rise Task Force and the New York State 2100 Commission. See, New York State Sea Level Rise Task Force: Report to the Legislature (2010), available at <http://www.dec.ny.gov/energy/45202.html>; New York State 2100 Commission (2013), Recommendations to Improve the Strength and Resilience of the Empire State’s Infrastructure, available at <http://www.rockefellerfoundation.org/blog/nys-2100-commission-report-building>.

3. See, Environmental Notice Bulletin—Statewide Notices 6/10/2015, available at [http://www.dec.ny.gov/enb/20150610\\_not0.html](http://www.dec.ny.gov/enb/20150610_not0.html).

4. See, Sea Level Rise—Projections and Impacts for New York, available at <http://www.dec.ny.gov/energy/45202.html>.

5. *Id.*

6. See, CRRRA Summary, *supra* n.1.

7. The projections regulation will be codified in 6 NYCRR Part 490.

8. See CRRRA Summary, *supra* n.1.

9. R. Horton, 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. See, <http://www.nyserdera.ny.gov/climaid>.

10. M. Zhang, H. Bokuniewicz, W. Lin, S. Jang, and P. Liu, 2014. Climate Risk Report for Nassau and Suffolk, New York State Resilience Institute for Storms and Emergencies (NYS RISE), NYS RISE Technical Report TR2014?01. See, <http://www.nysrise.org>.

11. See, CRRRA Summary, *supra* n.1.

12. *Id.*

13. *Id.*

14. *Id.*

15. Sea-level rise is of concern to other eastern states, as well as to the federal government. See, e.g., Jan. 30, 2015, Executive Order of President Barack Obama, “Establishing A Federal Flood Risk Management Standard and a Process For Further Soliciting And Considering Stakeholder Input.” Office of Long Island Sound Programs Guidance on P.A. 12-101, An Act Concerning the Coastal Management Act and Shoreline Flood and Erosion Control Structures (Connecticut), available at [http://www.ct.gov/deep/lib/deep/newsletters/soundoutlook/pa\\_12\\_101\\_coastal\\_omnibus\\_fact\\_sheet.pdf](http://www.ct.gov/deep/lib/deep/newsletters/soundoutlook/pa_12_101_coastal_omnibus_fact_sheet.pdf); Preparing for Tomorrow’s High Tide (Delaware), available at <http://www.dnrec.delaware.gov/coastal/Documents/SeaLevelRise/SLRADaptPlanExecSummaryforWeb.pdf>; Regulations Addressing Components of Sea Level Rise Impacts (Florida), available at <http://www.broward.org/NaturalResources/AboutUs/Documents/wabpres011614femaregs.pdf>; and Sea-Level Rise Study Update (North Carolina), available at <http://portal.ncdenr.org/web/cm/sea-level-rise-study-update>.

16. Charlotta A. Biblow, “New York Adopts Significant Changes to Brownfield Cleanup Program,” NYLJ, May 28, 2015.

17. The proposed definitions can be found at <http://www.dec.ny.gov/regulations/101915.html>.

18. See, <http://www.dec.ny.gov/regulations/101908.html>.