New York Codes, Rules and Regulations Title 6 Part 490, Projected Sea-level Rise

Update

Request for Pre-proposal Comment

Introduction

The New York State Department of Environmental Conservation (DEC) requests comment on its proposed method for development of updated projections of sea level rise along New York State's tidal coast. Comments should focus on the method DEC has proposed for development of projections and the resulting projections, and not on application of those projections in regulatory, planning, funding or other decision-making processes. Although the opportunity to comment on this pre-proposal is open to all, DEC is particularly interested in comments from individuals with expertise relevant to projection of sea level rise and climate change.

Background

On September 22, 2014, Governor Andrew Cuomo signed into law the Community Risk and Resiliency Act, Chapter 355 of the Laws of 2014 (CRRA). CRRA is intended to ensure that decisions regarding permits regulated by the Uniform Procedures Act and certain expenditures and facility-siting regulations consider future physical risk due to climate change, including sea level rise. Among other things, CRRA amended the New York State Environmental Conservation Law (ECL) to require DEC to adopt regulations establishing science-based State sea level rise projections and to update those projections at least every five years (ECL § 3-0319). Pursuant to this requirement, DEC adopted 6 NYCRR Part 490, Projected Sea-level Rise[1] in February 2017 and is now seeking comment related to the required update.

2017 Projections

In its 2017 Part 490 DEC adopted projections included in Horton et al. (2014), prepared for the New York State Energy Research and Development Authority's "ClimAID" report. ClimAID provided model-based projections of sea level rise for three regions of the State, for three intervals of time (2020s, 2050s, 2080s) and for the year 2100. Each of the time intervals is centered on the given decade, e.g., 2020s refers to the years 2020 through 2029.[2]

ClimAID's sea level rise projections were based in part on the outputs of more than 20 global climate models from the Intergovernmental Panel on Climate Change's (IPCC) Coupled Model Intercomparison Project Phase 5 (CMIP5),[3] downscaled to New York State. ClimAID's analysis used the IPCC's Representative Concentration Pathways (RCP) 4.5 and 8.5 as inputs. RCP 4.5 describes a scenario in which global greenhouse gas emissions increase only slightly before declining around the year 2040, leading to a stabilization of atmospheric greenhouse gas concentrations shortly after the year 2100. RCP 8.5 assumes no significant global greenhouse

[1] Projected Sea-level Rise, https://www.dec.ny.gov/regulations/119069.html

[2] 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. https://www.nyserda.ny.gov/climaid

[3] Taylor, K.E., R.J. Stouffer, G.A. Meehl 2012. An overview of CMIP5 and the experiment design, Bull. Amer. Meteor. Soc., 93, 485-498. DOI:10.1175/BAMS-D-11-00094.1

gas emission-reduction policies are implemented and emissions increase, leading to higher atmospheric greenhouse gas concentrations.[4]

ClimAID's 2014 projections incorporated additional information, e.g., expert judgment, to account for anticipated changes in rates of melt of land-based ice that had not been more rigorously included in the IPCC's quantitative models. The methods used by Horton et al. (2014) to develop the 2014 ClimAID projections are identical to those used to generate sea level rise projections for the New York City Panel on Climate Change (NPCC) and are described in more detail in Horton et al. (2015[5]) and NPCC (2015[6]).

ClimAID reported its range of projection outputs in percentiles, e.g., 90th-percentile projection means that 90 percent of the outputs were equal to or less than that projection and 10 percent of the outputs were greater.[7] DEC based its low, low-medium, high-medium and high projections for the three regions of the State on the 10th, 25th, 75th and 90th percentiles of ClimAID projection outputs, respectively. ClimAID assumed outputs were normally distributed, and DEC, in adopting the 2017 Part 490 medium projection as the 50th percentile of ClimAID's outputs, calculated the 50th percentile as the average of the 25th- and 75th-percentile outputs.

Projection Update

In its Part 490 update, to ensure consistency in its regulatory and other programs, DEC intends to maintain the projection format used in the original Part 490 regulation. That is, the express terms will provide low, low-medium, medium, high-medium and high projections for three tidal regions of the State, as defined in the original regulation. However, the 2020s projections will be replaced by projections for the 2030s. Projections for the 2050s, 2080s and 2100 will be included, as in the original regulation. As discussed below, DEC proposes to include projections for the year 2150 in the updated regulation and to include a very high projection that reflects a potential low-probability, high-consequence rapid ice melt (RIM) scenario.

Update Methodology

The current work to update sea level rise projections is being undertaken as part of the New York State Climate Impacts Assessment, funded by the New York State Energy Research and Development Authority (NYSERDA).[8] Advances in the IPCC approach to projecting sea level rise will allow NYSERDA and DEC to more fully ground the New York State projections on those provided by the IPCC in its 6th Assessment Report (AR6).[9] However, as AR6 provides projections based on several different RCP/greenhouse gas emissions scenarios, DEC's New

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[4] ibid.

[5] Horton, R., C. Little, V. Gornitz, D. Bader and M. Oppenheimer. 2015. New York City Panel on Climate Change 2015 Report: Sea level rise and coastal storms. Ann. New York Acad. Sci. 1336:36-44. doi:10.1111/nyas.12593

[6] NPCC. 2015. Appendix IIB. Sea level observations and projections: Methods and Analyses. Ann. N.Y. Acad. Sci. 1336(1):116-150. doi:10.1111/nyas.12593

[7] op cit. Horton et al., 2014.

[8] New York State Climate Impacts Assessment. https://nysclimateimpacts.org/

[9] Fox-Kemper, B., H. T. Hewitt, C. Xiao, G. Aðalgeirsdóttir, S. S. Drijfhout, T. L. Edwards, N. R. Golledge, M. Hemer, R. E. Kopp, G. Krinner, A. Mix, D. Notz, S. Nowicki, I. S. Nurhati, L. Ruiz, J-B. Sallée, A. B. A. Slangen, and Y. Yu. 2021. Ocean, Cryosphere and Sea Level Change. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press.

York State sea level rise projections will depend on the scenarios chosen to be included in the analysis.

Emissions Scenarios

AR6 describes the climate response to five illustrative scenarios. Each illustrative scenario represents a combination of one of four shared socio-economic pathways (SSP) and one of six representative concentration pathways (RCP). For example, SSP1-1.9 describes a scenario in which the world follows the sustainable pathway described by SSP1 and adopts GHG mitigation polices that result in 1.9 W/m^2 additional radiative forcing by 2100.[10] Projected changes in global surface temperature by 2081-2100 are provided in Table 1 for each of the five illustrative emissions scenarios.

Table 1. Projected changes in global surface temperature by 2081-2100, for five illustrative emissions scenarios, relative to 1850-1900 baseline.[11, 12]

Scenario	Description	Best estimate (°C)	Very likely range of warming (°C)
SSP1-1.9	Sustainability	1.4	1.0-1.8
SSP1-2.6	Inequality	1.8	1.3-2.4
SSP2-4.5	Middle of the road	2.7	2.1-3.5
SSP3-7.0	Regional rivalry	3.6	2.8-4.6
SSP5-8.5	Fossil fueled development	4.4	3.3-5.7

AR6 intentionally assigns no probabilities to any of these scenarios, and does not weigh in on whether any of the five illustrative emissions scenarios are more likely than others. Rather, the IPCC intends these scenarios to represent the full range of possible futures that planners should consider.

[10] See Explainer: How "Shared Socioeconomic Pathways" explore future climate change, for a non-technical description of the use of shared socioeconomic and representative concentration pathways in understanding future climate change. https://www.carbonbrief.org/explainer-how-shared-socioeconomic-pathways-explore-future-climate-change/, accessed December 20, 2022.

[11] op cit. IPCC, 2021. Table SPM.1.

[12] Riahi, K., D. van Vuuren, E. Kriegler, J. Edmonds, B. O'Neill, S. Fujimori, N. Bauer, K. Calvin, R. Dellink, O. Fricko, W. Lutz, A. Popp, J. Cuaresma, S. KC, M. Leimbach, L. Jiang, T. Kram, S. Rao, J. Emmerling, K. Ebi and M. Tavoni. 2017. The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview. Global Environmental Change. 42: 153-168. https://www.sciencedirect.com/science/article/pii/S0959378016300681

Sea Level Rise Scenarios

AR6 provides updated projections of global mean and regional sea level rise up to the year 2150. These projections were developed by assessing the individual contributions to sea level rise of the drivers of projected sea level change (the same drivers assessed by Horton et al. (2014[13], 2015[14])) and combining them to project total change. (See box.) An energy budget emulator, i.e., a simplified model of the earth system's response to changes in atmospheric greenhouse gas levels, was used to develop projections of global surface air temperatures (GSAT) and of temperature-dependent factors contributing to sea level change: thermal expansion, and ice sheet and glacier mass balance. (See Forster et al., 2021.[15])[16]

Drivers of sea level change assessed in AR6

- Thermal expansion
- Greenland ice sheet mass balance
- Antarctic ice sheet mass balance
- Glacier mass balance
- Land water storage
- Ocean dynamic sea level

AR6 projections of land-water storage were based on relationships between population, and groundwater depletion and water impoundments. The Coupled Model Intercomparison Project Phase 6 (CMIP6) model ensemble[17] was used to derive a correlation between global sea level change and ocean dynamic sea levels (regional variations in sea level driven by wind, heating, evaporation, precipitation and changes in the earth's gravity field resulting from loss of ice mass. This correlation was then used with projections of global sea level change to project changes in ocean dynamic sea levels. Estimates of gravitational, rotational and deformational effects were driven by projected ice-sheet, glacier and land-water storage changes. Vertical land motion was based on a statistical model of tide-gauge data. See Fox-Kemper et al. (2021) for a full discussion of the methods used to generate the sea level rise projections provided by AR6.[18]

AR6 provides projections of global sea level rise for the five SSP scenarios listed in Table 1. Projections for these five scenarios include only processes for which there is medium confidence, including projections from ice-sheet models. AR6 also provides low-confidence projections for SSP1-2.6 and SSP5-8.5. These low-confidence projections integrate potential, but uncertain, ice sheet processes and marine ice cliff instability, about which a low level of agreement exists. The low-confidence projections have not been assessed as likely but are

[13] op. cit., Horton et al., 2014.
[14] op cit., Horton et al., 2015.
[15] Forster, P., T. Storelvmo, K. Armour, W. Collins, J.L. Dufresne, D. Frame, D.J. Lunt, T. Mauritsen, M.D. Palmer, M. Watanabe, M. Wild, and H. Zhang, 2021: The Earth's Energy Budget, Climate Feedbacks, and Climate Sensitivity. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 923–1054, doi:10.1017/9781009157896.009.
[16] op cit. Fox-Kemper et al., 2021.
[17] Eyring, V., Bony, S., Meehl, G. A., Senior, C. A., Stevens, B., Stouffer, R. J., and Taylor, K. E.: Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organization, Geosci. Model Dev., 9, 1937-1958, doi:10.5194/gmd-9-1937-2016, 2016.
[18] op cit. Fox-Kemper et al., 2021.

included in AR6 due to their potential high consequence. (See Bamber et al., 2019[19], DeConto et al., 2021[20].) In addition to the provided projections of global sea level rise, AR6 provides regional projections on a regular global grid and for individual tide gauge stations. Projections are based on a 1995 to 2014 baseline. These projections are described as medium confidence, and the 17th to 83rd percentile range is described as likely.[21]

NASA has made the AR6 projections available for visualization and download through its Sea Level Projection Tool. The NASA tool provides the 5th, 17th, 50th, 83rd and 95th quantile projections, in decadal increments, from 2020 through 2150, for each of the seven sea level rise scenarios described above:

- SSP1-1.9
- SSP1-2.6
- SSP2-4.5
- SSP3-7.0
- SSP5-8.5
- SSP1-2.6 low-confidence
- SSP5-8.5 low-confidence[22]

The NASA tool provides median gridded regional projections and projections at locations of individual tide gauges for the seven sea level rise scenarios, including for a region that includes eastern Long Island (latitude 41°, longitude -73°) and for the tide gauge at the Battery, New York City.

To generate New York State projections, researchers with the New York State Climate Impacts Assessment obtained the full distribution of IPCC projections, i.e., the 1st to 99th-percentile projection, for three of the seven sea level rise scenarios, for 2030, 2050, 2080, 2100, and 2150, for the Battery and the region that includes eastern Long Island. The researchers selected the 10th, 25th, 50th, 75th, and 90th percentile values for the distribution across the 3 scenarios. Researchers then adjusted the projections to solve for the decadal "middle" years, e.g., 2035, 2055, for consistency with the ten-year averaging used in the Part 490 projections. This approach allows researchers to generate projections for a single sea level rise scenario or for a combination of selected scenarios.

As described above, the IPCC has not indicated the relative probabilities that any of the illustrative scenarios included in AR6 will occur. However, the IPCC Working Group III contribution to AR6 assessed trends in international ambition to reduce GHG emissions and

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[19] Bamber, J.L., M. Oppenheimer, R.E. Kopp, and R.M. Cooke. 2019. Ice sheet contributions to future sea-level rise from structured expert judgment. Proc. Natl., Acad. Sci. U.S.A. 116 (23) 11195-11200. https://doi.org/10.1073/pnas.1817205116

[20] DeConto, R.M., D. Pollard, R.B. Alley, I. Velicogna, E. Gasson, N. Gomez, S. Sadai, A. Condron, D. M. Gilford, E. L. Ashe, R. E. Kopp, D. Li and A. Dutton. 2021. The Paris Climate Agreement and future sea-level rise from Antarctica. *Nature* 593, 83–89 2021.

[21] op cit. Fox-Kemper et al., 2021.

[22] https://sealevel.nasa.gov/data_tools/17, accessed March 12, 2023.

projected emissions associated with policies implemented before 2021 and national determined contributions (NDCs) announced prior to the 2021 COP26. Working Group III concluded, with medium confidence, that GHG emissions will rise to a median global warming level of 3.2°C unless policies implemented before 2021 are strengthened. This level of warming is consistent with SSP2-4.5, for which the IPCC projects a very likely range of warming of 2.1-3.5°C.[23]

DEC considered basing its projections on SSP2-4.5, on the assumption that sea level rise projections associated with in-place GHG-reduction policies could be considered the most likely. However, growing confidence that a certain greenhouse gas concentration level, or even amount of global warming may not be reached is a very different thing than confidence that a sea level height will not be reached, given all the uncertainties in the chain from greenhouse gas concentration and global warming to sea level height. Furthermore, DEC notes reports of increasing ice loss from Antarctic and Greenland ice sheets and increasing uncertainty among experts regarding the ice sheet contribution to sea level rise, as described by Bamber et al., who also note that consideration of the upper tail of sea level projections is critical to robust decision making in managing risk.[24]

To provide for consideration of a range of possible futures, including potential for low-probability, high-consequence sea level rise scenarios associated with rapid melt of land-based ice, DEC proposes adoption of projections based on a blending of projections associated with three illustrative scenarios:

- SSP2-4.5 – consistent with Paris Agreement Nationally Determined Contributions
- SSP5-8.5 – medium confidence – additional amplifying feedback mechanisms
- SSP5-8.5 – low confidence – includes some rapid ice melt

In developing these projections, researchers combined the 1st to 99th-percentile model outputs, for the three scenarios, generating 297 values, for New York City and eastern Long Island. They then used the resultant distributions to determine the 10th, 25th, 50th, 75th and 90th percentile projections and adjusted them to solve for the decadal "middle" years, e.g., 2035, 2045, for consistency with the ten-year averaging used in the Part 490 projections.

As the IPCC did not develop projections for the Mid-Hudson region, from Troy to Kingston, the Mid-Hudson projections are based on the New York City projections, with an adjustment to account for glacial isostatic rebound north from Kingston.

There is low confidence that ice-sheet processes will influence global mean sea level rise through 2100 under low-emission scenarios. However, ice-sheet processes in which there is low confidence could lead to total global mean sea level rise substantially greater than considered likely by AR6.[25] Gornitz et al. (2019) argue that acceleration of ice mass losses and potential ice

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[23]IPCC. 2022. Summary for Policymakers. In: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.001.
https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf

[24] op cit. Bamber et. al., 2019.

[25] op cit. Fox-Kemper et al., 2021.

sheet instability may result in sea levels by the latter part of the 21st century that are higher than previously anticipated. These authors provide an Antarctic rapid ice melt scenario (RIM) for New York City. No projections reflecting an RIM scenario are available for the Long Island or Mid-Hudson regions. Due to the high degree of uncertainty of any RIM projection relative to the small differences among the three tidal regions described in Part 490, DEC proposes to apply the New York City RIM projection of Gornitz et al. (2019) to the Long Island and Mid-Hudson regions.[26, 27]

DEC does not propose to include projections beyond 2150 in this update due to the deep uncertainty regarding multi-century ice-sheet response in high emissions scenarios. AR6 concludes that under SSP1-2.6, a relatively low emissions scenario with a very likely range of warming of 1.3 to 2.4°C by 2100, global mean sea level will rise between 12 and 122 inches. Adding to this large uncertainty regarding long-term committed sea level rise, global mean sea level is projected to rise by 67 to 268 inches by 2300, even if marine ice cliffs remain stable. Marine ice cliff instability could result in up to 52 feet of sea level rise by 2300.[28]

DEC's current Flood Risk Management Guidance relies primarily on the medium and high projections of sea level rise.[29] However, the proposed RIM projection may serve as a proxy for a longer-term projection for siting and design of projects on land uses for which the risk of flooding would be unacceptable.

DEC's proposed updated sea level rise projections, based on the described methodology, are presented in Table 2. Table 3 provides a comparison of the proposed updated projections with those included in Part 490 (2017) for the 2050s and 2080s time slices and the year 2100, with differences presented in inches. Table 4 provides the same comparison, with differences shown as a percentage of the Part 490 (2017) projection.

As Table 4 highlights, the proposed updated low (10th-percentile) and low-medium (25th-percentile) projections are considerably higher than the corresponding 2017 projections. Further, the range of projections from low to high is considerably smaller in the updated projections through the 2050s, i.e., a 22-inch low to high range in the 2017 projections vs. a 10- to 12-inch range in the updated projections. This narrowing of the range of mid-century projections is consistent with the AR6 finding that, up to 2050, projections exhibit little dependence on emission scenarios, with scenarios diverging after 2050.[30]

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[26] Gornitz, V., M. Oppenheimer, R. Kopp, P. Orton, M. Buchanan, N. Lin, R. Horton, and D. Bader. 2019. New York City Panel on Climate Change 2019 Report Chapter 3: Sea Level Rise. Ann. N.Y. Acad. Sci., 1439: 71-94. https://doi.org/10.1111/nyas.14006

[27] Gornitz, V., M. Oppenheimer, R. Kopp, R. Horton, P. Orton, C. Rosenzweig, W. Solecki and L. Patrick. 2020. Enhancing New York City's resilience to sea level rise and increased coastal flooding. Urban Climate 33:100654. https://www.sciencedirect.com/science/article/abs/pii/S2212095519301798

[28] op cit. Fox-Kemper et al., 2021.

[29] New York State Department of Environmental Conservation. 2020. Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act. 100 pp. Albany, NY. https://www.dec.ny.gov/docs/administration_pdf/crrafloodriskmgmtgdnc.pdf

[30] op cit. Fox-Kemper et al., 2021.

Table 2. Updated projections of sea level rise for three tidal regions of New York State, based on DEC's proposed methodology. Projections are in inches, relative to a 1995-2014 baseline, and are based on a combination of the SSP2-4.5, SSP5-8.5-medium confidence and SSP5-8.5-low confidence projections.

Projection	Low	Low-Medium	Medium	High-Medium	High	Very High
Percentile	**10th**	**25th**	**50th**	**75th**	**90th**	**RIM Scenario**
Mid-Hudson (Albany)						
2030s	5	7	8	10	12	NA
2050s	11	12	14	17	21	NA
2080s	18	21	26	35	41	83
2100	21	25	32	46	60	114
2150	32	41	52	82	171	NA
New York City/Lower Hudson Region (New York City)						
2030s	6	7	9	11	13	NA
2050s	12	14	16	19	23	NA
2080s	21	25	30	39	45	83
2100	25	30	36	50	65	114
2150	38	47	59	89	177	NA
Long Island Region (Montauk Point)						
2030s	7	8	10	12	14	NA
2050s	13	15	18	21	25	NA
2080s	23	26	32	41	48	83
2100	27	32	39	54	69	114
2150	42	50	63	94	185	NA

Table 3. Differences between updated projections of sea level rise based on DEC's proposed methodology and projections included in 6 NYCRR Part 490, Projected Sea-level Rise (2017), for three tidal regions of New York State. Differences are in inches. Positive values indicate updated projection greater than 2017 projection.

Projection	Low	Low-Medium	Medium	High-Medium	High
Percentile	**10th**	**25th**	**50th**	**75th**	**90th**
Mid-Hudson (Albany)					
2030s	NA	NA	NA	NA	NA
2050s	6	3	0	-2	-6
2080s	8	7	1	-1	-13
2100	10	7	0	0	-11
2150	NA	NA	NA	NA	NA
New York City/Lower Hudson Region (New York City)					
2030s	NA	NA	NA	NA	NA
2050s	4	3	0	-2	-7
2080s	8	7	1	0	-13
2100	10	8	0	0	-10
2150	NA	NA	NA	NA	NA
Long Island Region (Montauk Point)					
2030s	NA	NA	NA	NA	NA
2050s	5	4	2	0	-5
2080s	10	8	3	2	-10
2100	12	11	5	7	-3
2150	NA	NA	NA	NA	NA

Table 4. Percentage differences between updated projections of sea level rise based on DEC's proposed methodology and projections included in 6 NYCRR Part 490, Projected Sea-level Rise (2017), for three tidal regions of New York State. Differences are shown as percentage of 2017 projections. Positive values indicate updated projection greater than 2017 projection. Green shading indicates an updated projection lower than the corresponding 2017 projection, red shading, an updated projection greater than the corresponding 2017 projection.

Projection	Low	Low-Medium	Medium	High-Medium	High
Percentile	**10th**	**25th**	**50th**	**75th**	**90th**
Mid-Hudson (Albany)					
2030s	NA	NA	NA	NA	NA
2050s	120%	33%	0%	-11%	-22%
2080s	80%	50%	4%	-3%	-24%
2100	91%	39%	0%	0%	-15%
2150	NA	NA	NA	NA	NA
New York City/Lower Hudson Region (New York City)					
2030s	NA	NA	NA	NA	NA
2050s	50%	27%	0%	-10%	-23%
2080s	62%	39%	3%	0%	-22%
2100	67%	36%	0%	0%	-13%
2150	NA	NA	NA	NA	NA
Long Island Region (Montauk Point)					
2030s	NA	NA	NA	NA	NA
2050s	63%	36%	13%	0%	-17%
2080s	77%	44%	10%	5%	-17%
2100	80%	52%	15%	15%	-4%
2150	NA	NA	NA	NA	NA

To Comment

DEC will consider comments received on its proposed methodology and projections in preparing its final proposed projections for the update to Part 490. Please submit all comments via email to climatechange@dec.ny.gov. Please include the words “Sea Level Rise” in the subject line of the email to ensure proper routing and consideration of your comments.

Comments may also be submitted in writing to the following address:

Sea Level Rise
Office of Climate Change
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-1030

Comments must be received by 4:45 p.m., May 12, 2023.

DEC will hold an informational webinar on its sea level rise projection update at 11:00 a.m., Wednesday, May 3, 2023. Registration for this webinar is required. to register, please send an email to climatechange@dec.ny.gov before 4:45 p.m., May 1, 2023. Please include the words “Part 490 Webinar” in the subject line of the email to ensure proper routing. A webinar link will be distributed to all persons registering on May 2, 2023.