CHESAPEAKE RISING

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I. INTRODUCTION

Across the globe, climate change is altering weather patterns and impacting communities.[1] On the east coast of the United States, communities throughout the Mid-Atlantic region, but particularly within the Chesapeake Bay, have already begun experiencing impacts from climate change.[2] These include rising sea levels, increased flooding, and more severe and frequent storm events.[3]

Any chance the Chesapeake Bay has of reversing or mitigating climate change impacts requires a combination of strong science, good policies, and clear regulations. To facilitate conversations about what is currently missing in the Chesapeake Bay's legal and policy landscape, Maryland Sea Grant, the Environmental Law Institute, and the Georgetown Climate Center hosted an interdisciplinary symposium bringing together scientists, academics, regulators, law students, and young lawyers to explore ways to enhance resilience and climate adaptation in coastal communities in the Chesapeake Bay.[4]

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[1] *See* Climate Change Science, U.S. ENV'T PROT. AGENCY (last updated Mar. 3, 2026).

[2] Climate Change, CHESAPEAKE BAY FOUND. (last visited Mar. 18, 2026).

[3] *Id*.

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This introductory article will discuss the challenges facing coastal communities in the Chesapeake Bay (the Bay), which were the impetus for this project, and the *Chesapeake Rising* project's history and purpose. It will then discuss the symposium, including key talking points, before finally previewing the law review articles authored by researchers in this issue.

II. ISSUES FACING THE CHESAPEAKE BAY

The Chesapeake Bay is the largest estuary in the United States, encompassing 64,000 square miles of watershed and 18 million people across seven different jurisdictions: Connecticut, Delaware, the District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia.[5] The Chesapeake Bay region is facing a myriad of challenges brought on by changing climate conditions. Sea level rise, extreme storm events, flooding, erosion, and other effects of a variable climate are tightly linked to coastal community sustainability.[6]

Coastal communities within the Chesapeake Bay region are particularly susceptible to climate change effects because of the Bay's naturally flat, low-lying terrain, land subsidence, and high coastal population density.[7] Predictions as to exactly how much sea levels in the Bay will rise vary; however, moderate predictions from the U.S. Geological Survey estimate sea level rise in the Chesapeake Bay will be between 1.3 - 5.2 feet over the next century.[8] Should these predictions come true, it would mean water intrusion into miles of land in coastal areas, affecting Maryland's Eastern Shore, DC, Baltimore, Virginia's Eastern Shore, and more.[9] Sea level rise also contributes to increasingly severe weather events, as increased sea levels lead to higher flood waters and powerful

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Annalise Kenney, and Julissa Murrietta. We greatly appreciate the help from all of our facilitators and notetakers during this symposium.

[5] *The Watershed*, CHESAPEAKE BAY PROGRAM (last visited Mar. 18, 2026).

[6] CHESAPEAKE BAY FOUND., *supra* note 2.

[7] *Climate Change*, CHESAPEAKE BAY ENV'T CTR. (last visited Mar. 18, 2026).

[8] JACK EGGLESTON & JASON POPE, U.S. GEOLOGICAL SURVEY, CIRCULAR 1392, LAND SUBSIDENCE AND RELATIVE SEA-LEVEL RISE IN THE SOUTHERN CHESAPEAKE BAY REGION (2013).

[9] Jackie Pickford, *Is the Chesapeake Bay's water rising or is the land sinking?*, CHESAPEAKE BAY PROGRAM (Feb. 7, 2023).

storm surges.[10] Heavy storms contribute to soil erosion, increased stormwater runoff, and, of course, flooding.[11] All these can have devastating impacts on coastal communities. These communities in the Mid-Atlantic region, particularly those historically underserved and overburdened, are already experiencing the impacts of climate change.[12] Science, law, and policy are vital to navigating this shifting landscape.

In addition to the series of impacts hitting the Bay, the framework for approaching these issues is unique in the Chesapeake Bay due to the vast number of jurisdictions that must play a role in ensuring successful protection. Between federal, state, local, and municipal governments, as well as regional compacts and commissions, there are dozens of groups that must work towards cohesive goals to affect change throughout the Bay. Management and restoration efforts, therefore, necessitate collaboration between multiple states, their agencies, and federal agencies.

III. PROJECT HISTORY AND PURPOSE

In 2023, the National Sea Grant Law Center promulgated a request for proposals for projects to host an academic symposium addressing priority coastal law and policy issues that would generate law review articles. Maryland Sea Grant (MDSG) partnered with the Georgetown Climate Center (GCC) and the Environmental Law Institute (ELI) to draft a proposal for a one-day symposium that would examine the major legal and policy issues arising from the impacts of climate change on coastal communities within the Chesapeake Bay.

The goals of the proposed symposium were to: (1) advance the understanding of current legal and policy challenges to climate adaptation in Mid-Atlantic coastal communities; (2) facilitate discussions between young lawyer authors and seasoned practitioners, elected officials, regulators, scientists, academics, and community thought leaders about how to address the challenges;

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[10] *Sea Rise and Storms on the Chesapeake Bay*, NATIONAL GEOGRAPHIC (last visited Mar. 18, 2026).
[11] CHESAPEAKE BAY FOUND., *supra* note 2.
[12] *Id*.

and (3) generate legal scholarship that encompasses what was learned at the symposium.

To achieve the above goals, the following objectives were created: (1) to explore existing gaps in legal scholarship on pressing coastal adaptation issues not already covered in the National Sea Grant Law Center's (NSGLC) *Sea Grant Law & Policy Journal* (Journal) and other publications; (2) to create and meet with a steering committee to develop and refine symposium topics and identify potential authors and keynote speakers; (3) to engage early-career lawyers and advanced law students in the symposium design, participation, and article development through direct invitations and calls for submissions; (4) to design and conduct the symposium in collaboration with GCC and ELI; and (5) to collaborate with NSGLC and authors to develop manuscripts and identify peer reviewers to advance the Journal's production.

IV. THE CHESAPEAKE RISING SYMPOSIUM

MDSG, ELI, and GCC hosted the *Chesapeake Rising: Innovative Law & Policy Solutions for Climate Adaptation in Coastal Communities* symposium on April 2, 2025, at the Georgetown Climate Center in Washington, DC.[13]

A. Governance Frameworks in the Chesapeake Bay

To kick off the event, Serena McIlwain, the Secretary of the Environment at Maryland Department of the Environment (MDE), gave a rousing keynote address. She touched on themes that would be repeated throughout the day, including investing in smart infrastructure, like living shorelines and updated stormwater systems, inclusivity of marginalized groups, going beyond discussion to taking action, and advocating for stronger policies. These themes were also representative of the overarching theme of the morning: "Governance Frameworks in the Chesapeake Bay."

[13] *See* Kerry McClaughry, *Coasts, Climate, and the Law: What We Learned at the Chesapeake Rising Symposium*, MD. SEA GRANT (May 22, 2025).

Following the keynote address was a panel with Anna Killius, the Executive Director of the Chesapeake Bay Commission, and Emily Steinhilber, the Director of the Climate Resilient Coasts and Watershed division of the Environmental Defense Fund. Moderated by Joshua Saks, the Adaptation Program Director at GCC, panelists delved into flood risks and preparedness in the Bay, bipartisan restoration work being conducted across jurisdictions, and proposed updates to the Chesapeake Bay Agreement.[14] The panel also stressed the role of government in reacting to and mitigating climate change. Climate change impacts more than just stereotypical ecologically based programs, such as a department of environment or natural resources. It affects all programs; notably, health, housing, and economics. Following the panel were presentations from researchers,[15] more details of which can be found later in this article.

In the morning and afternoon, participants split into breakout groups that included a mix of professional backgrounds. In breakout discussions, participants built upon the messages from the keynote speakers, panelists, and researcher presentations in the preceding session to help achieve the symposium's objectives and outcomes. Each group discussed the major gaps in laws and policies that exist and prevent coastal communities from making necessary changes to protect themselves from the effects of climate change.

In the morning session, which focused on governance frameworks at the federal, state, and tribal levels, participants were first asked to identify the gaps they believed existed and then discuss, as a group, possible solutions. Important identified gaps included funding, differences in goals across and between levels of governments, incorporating tribes and communities' knowledge and strengthening their role in decision making, permitting flexibility, and public education and engagement. Solutions to these gaps included: incorporating traditional ecological knowledge; building trust in communities by partnering with land-grant Extension

[14] The most recent adaptation of the Chesapeake Bay Agreement was signed in 2014. The Chesapeake Bay Program promulgated draft revisions to the Agreement, the public comment period of which closed September 1, 2025. CHESAPEAKE BAY PROGRAM, CHESAPEAKE BAY WATERSHED AGREEMENT - BEYOND 2025 REVISION DRAFT 3 (2025).

[15] A "researcher" is the title of the law students and early career professionals who spoke at the Chesapeake Rising symposium and/or authored a law review article for this project.

department agents and trusted, established community and non-profit groups; collaborating with private landowners; and working to make climate change a bipartisan issue.

B. Place-Based Adaptation in the Chesapeake Bay

The afternoon session shifted focus to challenges at the local and municipal levels, as well as the role of private landowners in climate adaptation in the Bay. Vicki Arroyo kicked off the afternoon "Place-Based Adaptation in the Chesapeake Bay" session with her keynote address. Vicki Arroyo is a Professor from Practice at Georgetown Law School and was formerly the Associate Administrator for Policy at the US Environmental Protection Agency. Fostering engagement, she said, is the most important piece of the puzzle in working to extend climate change strategies to local communities and reach private landowners. Vicki Arroyo stressed that knowing the science or the laws and policies is insufficient. To make the changes necessary to protect the Bay's coastal communities, there must be consistent and purposeful engagement in the public and political spheres.

Steve Kline, President and CEO of the Eastern Shore Land Conservancy, Molly Mitchell, Assistant Professor at the Virginia Institute of Marine Science, and Jon Mueller, Director of the Maryland Carey School of Law Environmental Law Clinic, spoke on the afternoon panel, moderated by John Doherty, a Science and Policy Analyst for ELI. They explored the challenges localities, municipalities, and private homeowners are facing and will continue to face in the future due to the shifting climate. The impacts of hurricanes Katrina and Sandy were the impetus for many environmental regulations, Jon Mueller explained, and prompted many localities, such as those along the Atlantic seaboard, to conduct studies on their resiliency. Jon Mueller explained that the current shift from federal to state-led climate resiliency will grant states greater power to enact new regulations, yet also deprive them of federal funding avenues that were previously available. He predicted that litigation at the state level will become the foremost battleground in the fight against climate change. Steve Kline and Molly Mitchell delved into the potential damage coastal communities will see, especially in

agricultural areas like Maryland's Eastern Shore, due to high shoreline erosion[16] and tidal marsh migration.[17] Additionally, the panel covered how structural barriers, like living shorelines, can greatly reduce the impacts of storms and floods on coastal lands, while also pointing out the difficulties landowners face, including complex permitting processes and high or uncertain costs, in installing living shorelines.

In the afternoon breakout discussion, participants were asked what local and individual place-based (e.g., municipalities, unincorporated areas, private properties) adaptation and resilience law and policy gaps they believed exist, and what possible solutions may address those gaps. Ensuing discussions identified a lack of oversight and education regarding development in coastal areas, the inadequacy of existing disaster preparedness and prevention frameworks, and failure to engage and collaborate with private landowners as important gaps that prevented localities and landowners from implementing effective and cost-efficient climate resilience measures. The participants theorized that incentivizing insurance and tax revenue, and purposeful engagement and collaboration with private landowners, may bridge those gaps. They also proposed that increasing the Maryland Critical Area Commission's oversight of variances to build in the critical area,[18] educating the public on what managed retreat is and how takings claims may impact their coastal homes, and bolstering education programs addressing the benefits of nature-based solutions (like living shorelines) will help coastal landowners make informed decisions about their properties when implementing climate resiliency strategies.

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[16] Shoreline erosion, or coastal erosion, is the "process by which local sea level rise, strong wave action, and coastal flooding wear down or carry away rocks, soils, and/or sands along the coast." *Coastal Erosion*, U.S. CLIMATE RESILIENCE TOOLKIT (last visited Mar. 18, 2026).

[17] Tidal marsh migration is the effect of tidal wetlands moving away from existing habitats that are suffering from rising sea levels to more inland, higher, drier land. *Marsh Migration in Delaware*, DEL. DEP'T OF NATURAL RES. AND ENV'T CONTROL (last visited Mar. 18, 2026).

[18] MD. NAT. RES. CODE ANN. §8–1807. The "critical area" in Maryland is "[a]ll land and water areas within 1,000 feet beyond the landward boundaries of State or private wetlands…." *Id.*

V. THE LAW REVIEW ARTICLES

The law review articles featured in this issue are the result of research by early-career lawyers and students, referred to here as "researchers." Six researchers spoke at the symposium about their article topics, which encompassed their identified existing issues in coastal climate resilience, possible solutions to those issues, and outstanding questions they were looking to answer in the next phase of their research. The researchers who spoke at the symposium gained feedback from the participants during the symposium's breakout discussions, which specifically asked participants to consider what alternative research avenues or useful contacts the researchers should consider.

Researcher Kim Wood, a Fellow at GCC, did a deep dive into the roles and return on investment of taxpayer money of the relatively new position of chief resilience officers in state agencies. Elisabeth Jefferson, a law student at Emory University School of Law, explored the unique cultural heritage of Tangier Island off the coast of Virginia and the increasing challenges sea level rise is creating for that community. Kai Hardy, a former Fellow at Maryland Sea Grant, delved into litigation that has shaped the legal landscape of the Bay region and examined future impactful litigation. Kathleen Gagnon, a 2023 graduate from the University of Maryland Carey School of Law, weighed in on the role of the Critical Area Commission in collaboration with other local governments in protecting vulnerable coastlines from development. Researcher Bill Shultz, a law student at Georgetown University Law Center, debated different approaches and policies that could be implemented for agricultural communities in the Bay when facing climate-related issues like saltwater intrusion. Sydney Schuster, a law student at the University of Maryland Carey School of Law, brought to light the looming threat of wildfires and compared the fire preparedness of two fire-prone regions to that of the Bay.

Lauren Wiederkehr, a law student at the University of Maryland Carey School of Law, did not speak at the symposium. However, her article included in this Journal edition postulates that traditional ecological knowledge and indigenous knowledge have a place in current conversations and polices aimed at restoring the Bay.

VI. CONCLUSION

The Chesapeake Bay—the largest estuary in the United States—is under threat from climate change.[19] Its coastal communities have already been impacted by severe weather events like Hurricane Sandy and regularly experience flooding.[20] A holistic approach, encompassing science, law, and community engagement, is needed to combat these effects and best protect the Bay's coastal communities. The *Chesapeake Rising* symposium brought together a diverse range of stakeholders to consider the legal and policy challenges these coastal communities face and how these challenges may be solved. The resulting law review articles written for this special issue provide compelling analyses of the creative and comprehensive approaches that young legal and policy professionals are taking when facing a future of more extreme weather events and climate variability.

[19] CHESAPEAKE BAY FOUND., *supra* note 2.
[20] *Id*.