



**TESTIMONY OF WILLIAM A. STILES, JR.
SENIOR ADVISOR/FORMER EXECUTIVE DIRECTOR,
WETLANDS WATCH
REGARDING THE COASTAL BARRIER RESOURCES ACT,
AND H.R. 4590 AND H.R.2437**

**BEFORE THE HOUSE COMMITTEE ON NATURAL
RESOURCES,
SUBCOMMITTEE ON WATER, WILDLIFE, AND FISHERIES**

September 28, 2023

Mr. Chairman, Members of the Subcommittee, thank you for the opportunity to speak to you today regarding the Coastal Barrier Resources Act (CBRA).

I am William A. Stiles, Jr. and for the last sixteen years, I was executive director of Wetlands Watch, a Norfolk, Virginia-based statewide nonprofit that has been working on the conservation and protection of wetlands since 2000. We have depended upon a number of state and federal protections for coastal ecosystems, including CBRA. At present, there are nearly 164,000 acres in the Coastal Barrier Resources System (System) in Virginia, with nearly 155,000 acres in aquatic habitat and over 8,700 acres of that in uplands. This acreage represents a significant portion of our coastal resources. The CBRA is important for Virginia and the nation, and there are opportunities to expand its benefits that Congress should act upon.

The Coastal Barrier Resources Act is a bipartisan success story supported by taxpayer advocates, conservative think tanks, environmental groups, state officials, sportsmen's organizations, insurance industry groups, and Democrats and Republicans alike. CBRA is unique among federal programs. It has three goals: save federal tax dollars, conserve undeveloped coastal habitat, and promote public safety. To save federal tax dollars, CBRA prohibits most federal expenditures in areas included in the Coastal Barrier Resources System (System.) Development can still occur, but without the financial backing of the federal taxpayer. The CBRA System includes undeveloped areas, such as barrier islands and beaches, spits, inlets, wetlands, and estuarine areas. [Roughly 3.5 million acres are in the System](#) along the Atlantic Ocean, Gulf of Mexico, Great Lakes, U.S. Virgin Islands, and Puerto Rico.

CBRA has a long track record of bipartisan support. The original Act's author, [Rep. Thomas B. Evans \(R-DE\)](#), said [CBRA was needed](#) because "the U.S. taxpayer should not subsidize and bear the risk for private development on coastal barriers." As he signed the bill into law in 1982, [President Ronald Reagan noted that CBRA](#) "simply adopts the sensible approach that risk associated with new private development in these sensitive areas should be borne by the private sector, not underwritten by the American taxpayer." Rep. Gerry Studds (D-MA) introduced the Coastal Barrier Improvement Act of 1990, which expanded the CBRA System and was signed into law by Pres. George Bush. In 2000, legislation reauthorizing and strengthening CBRA was championed by Sen. John Chafee (R-RI) and signed into law by [Pres. Bill Clinton, who applauded](#)

[CBRA, saying that it](#), “discourages development, keeping lives out of harm’s way, protecting fish and wildlife habitat, and reducing wasteful expenditures of taxpayer dollars.” In 2005, [Sen. James Inhofe \(R-IN\) described CBRA](#) as “a free-market approach to conservation. These areas can be developed, but Federal taxpayers do not underwrite the investments.” And in 2018, Reps. Lisa Blunt Rochester (D-DE) and Thomas J. Rooney (R-FL) introduced the “Strengthening Coastal Communities Act of 2018,” which added 18,000+ acres to CBRA and was signed into law by Pres. Donald Trump.

By all measures, CBRA has been a phenomenal success. By removing the dozens of federal programs that subsidize coastal development, [CBRA has saved the Federal Treasury nearly \\$10 billion](#) in avoided expenditures and is on track to save billions more. CBRA has helped steer people away from areas prone to deadly hurricanes, rising seas, and growing climate change impacts, with [85% of CBRA areas remaining undeveloped or lightly developed](#). And CBRA has helped conserve habitat that is vitally important to wildlife and the nation’s commercial and recreational fishing industries. I would like to focus my discussion on the benefits of the CBRA and the need to expand and strengthen it through new legislation. My testimony will focus on:

- **Planning for tomorrow’s challenges today: Drawing on innovative state programs to implement a federal Coastal Hazards Pilot Project.** In order to protect areas that will be crucially important for tomorrow’s economies, environment, and public safety, Congress should authorize a Coastal Hazards Pilot Project, informed by on-the-ground state programs, to start identifying coastal hazard areas and areas where habitat can migrate as sea levels rise and front-line coastal defenses are lost.
- **Protecting today’s vulnerable coastal areas: Enacting the “Hurricane Sandy maps” and associated maps.** Congress should enact maps that would add 292,000+ acres to the CBRA in order to save the taxpayer billions of dollars, conserve important habitat, and ensure flood protections for today’s coastal communities.
- **Accurately reflecting coastal conditions: Updating the CBRA’s definitions.** CBRA’s definition of a “coastal barrier” needs to be updated to include bluffs and other land areas that help buffer upland communities from the impacts of storms, erosion, flooding and rising seas.

1. Planning for tomorrow’s challenges today: Drawing on innovative state programs to implement a federal Coastal Hazards Pilot Project.

It is imperative that on the federal level, we plan for the challenges that sea level rise will bring just as states are already doing, including in Virginia. Virginia has modified its shoreline protection laws as the first step in implementing a program to protect coastal areas at risk from sea level rise, along with adjacent upland areas, so that coastal habitat like wetlands can “migrate” into them in response to rising seas. These hazard-prone shoreline areas have restrictions in place to protect state waters, and conditions on development. This pragmatic, forward-looking approach will help coastal

communities plan for the future, and protect areas that can support important habitat. The CBRA, with its emphasis on reducing hazard-prone development and conserving habitat, provides the perfect federal mechanism for a similar approach.

This week, Senators Tom Carper (D-DE) and Lindsay Graham (R-SC) reintroduced their bipartisan “Strengthening Coastal Communities Act,” which amends the CBRA to authorize a two-year pilot project. The Act directs the Fish and Wildlife Service, in cooperation with the Army Corps of Engineers, National Oceanic and Atmospheric Administration (NOAA), Federal Emergency Management Agency and state governors, to develop criteria for mapping coastal hazard areas and areas to which habitat can migrate as sea level rises. The result of the project would be reported to Congress, and it would be up to Congress to act upon it. This Coastal Hazards Pilot Project should be included in any CBRA legislation considered by the House.

The CBRA Coastal Hazards Pilot Project in the Senate legislation reflects the same forward-looking pragmatism as Virginia’s program. Facing the reality of high sea level rise projections, Virginia made major modifications to our tidal wetlands and shoreline protection programs. These actions may provide a model for how the CBRA System might try to adapt to sea level rise and merit examination under a pilot program.

- **The Virginia Program: Acknowledging and Acting on Risks.**

Virginia’s program is the result of acknowledging and taking action upon serious risks that the state faces. Virginia has experienced the highest rate of relative sea level rise on the Atlantic Coast over the last century, rates of relative sea level rise [3 to 4 times the global average](#). We are already seeing the impacts from these higher tidal waters on our coastal resources and in our shoreline communities. Virginia will continue to experience even higher rates of relative sea level rise over the rest of this century, having been identified by NOAA as a sea level rise “hotspot.”

This has prompted many of Virginia’s state and local government agencies to use higher rates of relative sea level rise, specifically the NOAA intermediate high projections, in their planning and operations. [These projections indicate coastal Virginia](#) will see an additional 1.5 feet of relative sea level rise above current mean higher high water (MHHW) by 2045, 3 feet by 2075, and 4.5 feet 2100.

By [executive order in 2019](#), Virginia set the NOAA intermediate high projections as state planning guidance, which the Virginia Department of Transportation used in its [2020 engineering standards for bridge construction](#). As well, local governments adopted this guidance in sea level rise plans, such as the City of Virginia Beach’s 2020 “[Sea Level Wise](#)” plan. The regional planning entity in Southeast Virginia, the Hampton Roads Planning District, adopted this standard in 2018 in its “[Sea Level Rise Planning Policy and Approach](#)” guidance for the 17 member localities to use in their planning. The Department of Defense, in its [Joint Land Use Studies](#) in Norfolk/Virginia Beach/Portsmouth are using a similar rate, developed by the DoD Coastal Assessment Regional Scenario Working Group (CARSWG) in this work to ensure operational readiness for military facilities.

With these rates of relative sea level rise, areas within the Coastal Barrier Resources System (and the storm damage reduction they provide) will be severely adversely affected in just a few decades unless changes are made to CBRA. These needed changes are what the proposed Coastal Hazards Pilot Project would explore.

In Virginia, the 155,000 acres in the CBRA System that are aquatic habitat will experience major impacts as shallow water aquatic habitat converts to deeper water habitat, adversely affecting submerged aquatic vegetation. Vegetated tidal wetlands will have to transgress landward or drown in place. Barrier islands will migrate landward. Unless we can adapt the System to these changes, more residences and structures will be exposed to storm risk, resulting in higher disaster payments, and vitally important habitat will be lost.

- **Impacts of Sea Level Rise on Wetlands within the System and Wetlands Watch's Adaptation Efforts**

In the mid-Atlantic region, vegetated tidal wetlands adapt to sea level rise in two ways: they can accrete vertically or move horizontally. With modest sea level rise, these wetlands [can accrete vertically](#), capturing sediment and growing on top of prior year's vegetation. In the Chesapeake Bay region, this [rate of vertical accretion](#) is about two feet per century. However, Virginia's current rate of relative sea level rise on the Atlantic Coast is in excess of the [ability of vegetated tidal wetlands to accrete vertically](#). With the rates of relative sea level rise being experienced in Virginia, the only option for the intertidal ecosystem is to "move uphill" or transgress landward with the rising intertidal zone. If, however, there are hardened structures in the way – like buildings and seawalls – the wetlands cannot colonize the new/higher intertidal zone and will [drown in place](#).

In 2007, Wetlands Watch determined that with the rate of relative sea level rise we were experiencing then (+2.5 feet by 2100), we would lose between 50 and 80 percent of our vegetated tidal wetlands. If Virginia could keep the land uphill/landward from the wetlands free of development, allowing the coastal ecosystem to migrate or transgress landward as tidal waters rose, we would reduce that loss. However, if we allowed the land behind the wetlands to become developed, blocking the wetlands from migrating and causing them to drown in place, we would experience higher wetlands losses.

Facing this threat, in 2007 Wetlands Watch switched its focus from conventional wetlands protection and focused on sea level rise adaptation, becoming one of the first organizations in the country to undertake this work. Wetlands Watch developed partnerships at the local government level to help inform land use and natural resources decisions by county and city staff and leadership in order to minimize shoreline development and lessen future wetlands losses.

Working at the local level, Wetlands Watch saw that sea level rise adaptation was not just about the wetlands: coastal residents were at increasing flood risk from rising sea level as well. In coastal Virginia, we were seeing flood and storm damages increase and "sunny day" flooding disrupting communities. In Norfolk, Virginia, our schools started having "flood days" causing school delays and cancellation. Threats to our shoreline

economy, outlays for disaster payments, and a range of other community impacts needed to be addressed as well. Shoreline adaptation was not just about the ecosystem but had to include increasingly at-risk coastal communities

The approach Wetlands Watch has taken to address Virginia's sea level rise risk is similar to the one taken under CBRA. We have, from the beginning, seen habitat protection and community risk reduction as twin goals of our work. We realized that minimizing development along the tidal shoreline would both reduce coastal residents' exposure to risk while maintaining "escape routes" for the intertidal habitat. This is very similar to the approach that CBRA takes in reducing incentives for development that harm habitat and place people at risk.

- **Virginia Is Taking Action**

Virginia provides regulatory protection to the coastal ecosystem with the Virginia Tidal Wetlands Act ([Code of Virginia §62.1-44.15:20](#)) which runs in parallel with the protections under the Federal Clean Water Act ([33 USC §1344](#)). Virginia also regulates development and disturbances in the zone adjacent to and landward of the tidal wetlands under the Chesapeake Bay Preservation Act (CBPA) ([Code of Virginia § 62.1-44.15:67](#)) in order to protect water quality. Together these two statutes regulate disturbances and development in the zone from low tide to one hundred feet uphill from tidal wetlands.

In 2020, with the guidance of then-Secretary of Natural and Historic Resources, Matthew Strickler, Virginia's General Assembly added sea level rise to both of these regulatory programs, with a goal of ensuring the adaptation of Virginia's tidal and shoreline ecosystem. Both the Tidal Wetlands Law and the CBPA were changed to require permit decisions to include the NOAA intermediate high projections for relative sea level rise. As far as I can tell, Virginia is the first state in the country to put future conditions as a condition of permit approval under a shoreline regulatory program.

With these changes, both the intertidal and the shoreline buffer permits include future projections of sea level rise, requiring permits to anticipate those future higher water levels and adapt to them. The hope is that as the sea levels rise, development on the land behind the intertidal zone will have conditions placed that will keep it free of barriers to migration, allowing the tidal ecosystem to move "uphill" and escape higher tidal waters.

In addition, the General Assembly has put sea level rise into Virginia's on-site septic regulations, a response to the failure of septic systems along the coastal shoreline. Shoreline development is facing the consequences of our high rates of sea level rise as these septic systems become inundated, fail, and begin releasing sewage into coastal waters, often fouling shellfish aquaculture operations. New siting regulations being developed will place additional conditions on siting these systems, including greater setbacks from the coastal shoreline for new development. These measures would reinforce Virginia's efforts to begin stepping back from the tidal shoreline.

With these actions, Virginia is anticipating future sea level rise in both environmental protection and development decisions along its tidal shoreline. These policy actions to address the impacts of rising sea levels could inform a pilot program to address sea level rise within the Coastal Barrier Resources System.

Other states are responding as well. Maryland has a program to identify “[Sea Level Rise Wetland Adaptation Areas](#)” to better target land acquisition and conservation easement programs to create escape routes for the coastal ecosystem. In many coastal states, actions are being taken that would both benefit from and help inform the Coastal Hazards Pilot Project proposed by the Senate legislation.

We are strong supporters of the Coastal Barrier Resource System and see it as a long-standing bipartisan effort to protect coastal communities, preserve intertidal and shoreline natural resources, and limit federal taxpayer exposure to increasingly intense storm damage. It is imperative that the CBRS be strengthened to help address challenges that Virginia and other states are already working to address by authorizing the Coastal Hazards Pilot Project.

2. Protecting today’s vulnerable coastal areas: The benefits from expanding the CBRA by enacting the Hurricane Sandy maps and other CBRS maps.

Rising seas and climate change exacerbate hurricane damage, contributing to deadly and enormously costly storms. [Last year’s Hurricane Ian claimed more than 150 lives and caused over \\$112 billion in damage](#), making it the costliest hurricane in Florida’s history and the third-costliest in United States history. Coastal habitat, which supports wildlife and America’s commercial and recreational fishing industries, is disappearing. [More than 80,000 acres of coastal wetlands are being lost on average each year](#), with sea level rise expected to accelerate that rate.

Expanding the CBRA to include 277,000+ acres identified by the Fish and Wildlife Service in the Hurricane Sandy impacted states, plus more than 15,000 acres in the South Atlantic and Gulf of Mexico also identified by the Service, would lead to significant economic, public safety, and environmental benefits, such as those discussed below.

- **CBRA saves billions of federal tax dollars, with the capacity to save billions more.**

CBRA prohibits most federal expenditures in areas included in the CBRA System, including federal flood insurance, grants to build highways, bridges and roads from the Department of Transportation, and similar expenses. Just a few examples illustrate how CBRA is a plus for the U.S. taxpayer and why expanding it makes good economic sense. CBRA:

- *Reduces National Flood Insurance Program claims.* A [2023 study](#) found that areas along the Gulf of Mexico and Atlantic included in CBRA saved \$112 million

per year in reduced National Flood Insurance Program claims, a 7% savings in annual NFIP claims.

- *Generates multi-billion-dollar savings overall.* A [2019 economic study](#) found that CBRA has saved the federal taxpayer roughly \$9.5 billion and is projected to save \$11-\$108 billion over the next 50 years in shore areas included in CBRA. Extending CBRA upland would save billions more in avoided federal expenditures like disaster relief payments and federal flood insurance.

- **CBRA supports important economies.**

Protecting undeveloped coastal areas from the dozens of federal programs that fund coastal development and redevelopment is vital for multi-billion-dollar economies that depend on healthy coastal ecosystems. CBRA-protected areas are the backbone of many important coastal economies. CBRA:

- *Increases property values.* [A 2023 study](#) found that CBRA designation increases property values in adjacent areas, thereby increasing the overall property tax base.

- *Supports a healthy fishing industry.* Fish and shellfish depend on healthy wetlands and estuaries, but according to the National Oceanic and Atmospheric Administration (NOAA), coastal wetland degradation and loss has reduced the size and diversity of fish populations, affecting the sustainability of commercial and recreational fisheries. In 2019, these fisheries supported [1.8 million jobs and contributed \\$255 billion to the economy in sales](#).

- **Undeveloped areas included in CBRA help protect communities from deadly and costly storm damages.**

The undeveloped islands, beaches, spits, inlets, and wetland areas included in the CBRS provide important public safety benefits:

- *Reduce flood damage.* Wetlands act as natural sponges, absorbing and temporarily storing floodwaters. By holding back and slowing some of the floodwaters, wetlands can reduce the severity of flooding and erosion, protecting people, property, infrastructure, and agriculture from devastating flood damages. [An acre of wetlands can store 1.5 million gallons of floodwater](#). This protection saves vulnerable coastal communities [\\$23 billion each year](#).

- *Shield communities from storm and hurricane impacts.* A [study](#) funded by the insurance giant Lloyds of London found that coastal wetlands prevented more than \$625 million in property damages during the 2012 Hurricane Sandy, reducing property damages throughout the Northeastern United States by 10% on average.

- **CBRA areas provide vitally important habitat.**

CBRA-protected areas are some of the last remaining undeveloped habitat for birds, sea mammals, sea turtles and a host of other species. As development paves over and drains habitat, CBRA areas are a lifeblood for wildlife, providing benefits such as:

- *Sheltering and feeding birds.* [About one-half of North American bird species nest or feed in wetlands](#), with two of North America's migratory bird flyways passing over the Pacific and Atlantic coasts, where coastal wetlands provide habitat to waterfowl and shorebirds. [It is estimated](#) that birdwatching in the United States has an economic benefit of \$41 billion.
- *Supporting threatened and endangered species.* [Nearly half](#) of federally threatened and endangered species need wetlands for their survival.

Congress should enact the Hurricane Sandy maps of eligible areas along New England and the Mid-Atlantic.

The 2012 Hurricane Sandy claimed lives and caused billions of dollars-worth of damage in many parts of the U.S. coast, including nine states in New England and the Mid-Atlantic: New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland and Virginia. The USFWS used supplemental Hurricane Sandy funding to evaluate the nine states' coasts and developed maps depicting areas that could be added to the CBRA System in the states. The draft maps were released for public comment, and notices of the maps' availability were provided to governors, state and local officials, and the general public. After public comment and review, the maps were finalized by the USFWS and transmitted to Congress in April 2022 for action. Only Congress can enact the maps.

The Hurricane Sandy maps would add roughly 277,000 acres to the CBRA System. Undeveloped barrier island areas, beaches and spits, along with inlets, wetlands, and other estuarine areas would be added to the System and receive its unique protection from federal development subsidies. Nine states would gain acreage:

- New Hampshire: 681 acres
- Massachusetts: 32,746 acres
- Rhode Island: 1,544 acres
- Connecticut: 5,248 acres
- New York: 19,799 acres
- New Jersey: 71,492 acres
- Delaware: 31,216 acres

- Maryland: 19,008 acres
- Virginia: 96,435 acres

Congress should enact the maps of areas in the South Atlantic and Gulf of Mexico.

The USFWS has also identified areas in the South Atlantic and the Gulf of Mexico that qualify for inclusion in the CBRA and has developed maps that were reviewed and commented on by the public, finalized by the Service, and transmitted to Congress for action. These maps should also be enacted by Congress to maximize CBRA's benefits in these coastal regions. The bipartisan Senate bill, the "Strengthening Coastal Communities Act," and legislation introduced in the House in September 2023, H.R. 5490, the "Bolstering Ecosystems Against Coastal Harm" Act, would enact the Hurricane Sandy and South Atlantic and Gulf of Mexico maps. Expanding the CBRA to include these areas makes good economic and environmental sense and would increase and improve the nation's coastal resiliency.

3. Expand the definition of a coastal barrier.

When the CBRA was written in 1982, it defined "coastal barriers" as primarily composed of unconsolidated sediments, such as islands and beaches, reflecting the kinds of landforms that are dominant along the Mid- and South-Atlantic and Gulf of Mexico.

In 1990, Congress updated that definition in recognition of the fact that other coastal landforms and aquatic areas also act as "coastal barriers" since they shield upland communities from storm and hurricane impacts and erosion, and provide important habitat. Congress added areas like granitic outcroppings in New England to the definition of a coastal barrier, and consolidated landforms like the Florida Keys. Congress also extended the CBRA to areas along the Great Lakes, reflecting the role that landforms along the Lakes play in reducing upland storm damages and providing habitat. Congress also added wetlands, marshes, and estuarine areas to the definition of a coastal barrier, in recognition of the vital role that these areas play in slowing storm impacts and supporting wildlife.

As our scientific understanding of coastal processes has grown, Congress has responded by updating the definition of a coastal barrier. Another update is now needed to reflect new information about sea level rise and its impacts that's been learned since the last definition update in 1990. The bipartisan Senate "Strengthening Coastal Communities Act" would update the definition of a coastal barrier to include bluffs and areas that are and will be vulnerable to coastal hazards, such as flooding, storm surge, wind, erosion, and sea level rise. As I noted earlier in this testimony, the science of sea level rise is well-established, and federal agencies such as the Army Corps of Engineers, Department of Defense, NOAA and the Federal Emergency Management Agency are moving forward with programs to address sea level rise and its impacts. The CBRA must be updated to reflect what other federal agencies are doing and to keep

CBRA current with scientific information. House legislation on CBRA should include the full definitional change to CBRA that is in the bipartisan Senate bill.

H.R. 2437

Regarding H.R. 2437, a bill to revise the boundaries of the CBRS in Topsail, North Carolina, it is my understanding that H.R. 2437 is contrary to CBRA and would result in significantly increased taxpayer burdens. The bill would remove around 660 acres of land from the CBRS unit, which was established in 1982. There have been arguments that the area had infrastructure in place when it was added to the CBRS in 1983, and that therefore, it didn't meet the definition of an "undeveloped area" and shouldn't have been included in the CBRA System. But the Fish and Wildlife Service determined that the unincorporated north end of Topsail Island was largely undeveloped in 1982, the land met the criteria to be placed within the CBRS, and therefore, the area was correctly added to the CBRS in 1983. The USFWS testified to the legitimacy of the inclusion of this area in the CBRS in testimony before Congress in 2014, and again in the 2016 "Final Report to Congress" on a pilot project that began the process of digitizing the CBRS maps.

Lawsuits challenging the inclusion of the area in the CBRS have [likewise failed](#). A district court judge ruled that the CBRA designation was justified, and the court of appeals upheld the district court's ruling and dismissed the case.

If this area is removed from the CBRS, the federal taxpayer will be required to pay for expensive beach renourishment projects that the town wants the Army Corps of Engineers to undertake. The town of North Topsail Beach is [proposing to nourish](#) roughly 5,000 feet of shoreline every two years at a total cost of more than \$58 million over 30 years. As of the 2020 census, the town of North Topsail Beach has 1,000 residents, and the federal taxpayer would be required to help foot the bill for a nearly \$60 million beach renourishment project to benefit a handful of local residents.

The Fish and Wildlife Service has determined that the area was rightly included in CBRA, and a district court and court of appeals have upheld that determination. H.R. 2437 is not warranted.

CONCLUSION

We strongly support the Coastal Barrier Resources Act, and we urge Congress to plan for tomorrow's challenges today by drawing on innovative state programs to implement a two-year Coastal Hazards Pilot Project. We also call on Congress to protect today's vulnerable coastal areas by enacting the "Hurricane Sandy maps" and associated maps. And we support an update to CBRA's definition of a "coastal barrier" to accurately reflect coastal conditions and scientific advances in understanding sea level rise.

Thank you for the opportunity to testify.