ENLISTING PRIVATE LAW TO REGULATE PRIVATE CLIMATE ADAPTATION FAILURE

by Christian Stirling Haig

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SUMMARY

State and local governments are contending with the challenge of "residual climate risk"—threats posed by private adaptation failures that endanger surrounding communities. While policy tools like municipal ordinances can help address this gap, enforcement challenges, budget constraints, and private-property rights often limit their effectiveness. Meanwhile, federal support for adaptation has significantly declined, forcing state and local governments to explore alternative approaches. This Article argues that private-law remedies such as nuisance and negligence claims offer a viable, low-cost, and politically feasible mechanism to deter private adaptation failure and promote climate adaptation. Using Fort Lauderdale as a case study, it explores how state and local policymakers can struggle to address unmitigated threats, and discusses ways to promote property owners using private law to hold noncompliant neighbors accountable. While common-law doctrine will evolve in response to climate change, a proactive private-law strategy can help mitigate residual climate risk in the near term.

As climate change intensifies, communities face challenges in addressing risk from climate change threats like wildfire and flooding.[1] The public sector is indispensable to protecting communities from these physical risks, including through long-term planning and investment in more resilient infrastructure. However, government lacks the capacity to address *all* climate risk, in part because the public sector faces practical and legal limits that prevent it from directly compelling private individuals to invest in risk-reducing climate adaptation measures on private property.[2] This "residual climate risk" is the risk that private individuals fail to mitigate, but that is beyond the government's direct ability to address.

While residual climate risk may manifest on private property, it presents a worsening public policy problem, because private failure to adapt to climate change can leave surrounding public and private property exposed to increasing climate dangers. For example, a municipal government in an arid region may issue an ordinance requiring routine brush-clearing around private residences to reduce wildfire risk. Property-owner noncompliance, or "private adaptation failure," however, may provide wildfires with the fuel necessary to reach neighboring properties.[3] In sum, private adaptation failure that leaves residual climate risk unmitigated can endanger the wider public.

Unmitigated residual climate risk has already borne devastating consequences. In 2018, for example, the Camp Fire utterly destroyed the town of Paradise, California, killing 84 people.[4] Arson investigators traced the fire's

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1. Intergovernmental Panel on Climate Change (IPCC), Climate Change 2022: Impacts, Adaptation, and Vulnerability: Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change 51 (H.-O. Pörtner et al. eds., 2022) (discussing increasing physical threats to communities).
2. *See id.* at 162 (noting the insufficiency of public resources alone in addressing adverse climate change impacts).
3. *See* James Taylor, *Sacramento Says Residents Who Fail to Clear Dry Brush Could Face Fines During Fire Season*, CBS News (June 14, 2024), https://www.cbsnews.com/sacramento/news/sacramento-dry-brush-warning-fines-fire-season/ (Sacramento attempting to address private-property owners' failure to address climate risk).
4. Michael L. Ramsey et al., The Camp Fire Public Report 2 (2020).

origins to uncleared vegetation connecting with a broken Pacific Gas and Electric Company (PG&E) power line.[5] In violation of state law, and despite knowledge of the increasing climate risks, the company had reduced equipment and brush inspections to lower its operational costs.[6]

The Camp Fire provides an extreme example of private adaptation failure contributing to the near-annihilation of an entire community. It also highlights the problem the public sector faces in encouraging private adaptation to abate climate risk exposure. The state government can regulate PG&E's behavior, but it cannot reasonably survey all potential fire sources across all private property in California. To address climate risk, government must necessarily rely on private actors to adapt.

While climate risk—and, consequently, residual climate risk—continue to increase, state and local governments face an additional problem: the federal government's abdication of climate change policy. Shortly after inauguration, the Donald Trump Administration began directly and indirectly cutting support for state and local governments to address physical climate risk. These measures include cutting climate-related research essential to municipal planners,[7] halting federal funding for climate-resilience projects,[8] dismantling federal programs addressing local climate risk,[9] slashing federal disaster response essential to local reconstruction after climate disasters,[10] and undermining local climate-resilience planning.[11]

The Trump Administration's efforts to claw back funding from the Inflation Reduction Act may be particularly deleterious, given that it provided for more than $24 billion in federal funding specifically for local adaptation and resilience efforts.[12] Similarly, the Administration's proposed cuts at the Federal Emergency Management Agency (FEMA), which has traditionally covered more than 75% of disaster recovery costs, presents a dire financial threat to state and local governments in areas vulnerable to climate threats like hurricanes, floods, or wildfires.[13]

As in the first Trump Administration,[14] the federal vacuum in climate policy has triggered renewed calls for state and local governments to take a larger role in addressing climate change and its impacts.[15] However, state and local governments face much greater resource constraints, making the loss of federal support a substantial blow to subnational climate adaptation efforts.[16] The Administration's abandonment of local adaptation support comes just when local governments need it most.

Municipal finances face mounting pressure from climate change, and some municipalities could face default if they fail to adapt with sufficient speed.[17] Following

5. *See id*. at 2, 10.
6. This was not PG&E's first offense. Company statistics tie vegetation mismanagement to 37% of fires initiated by their assets. *See id*. at 67.
7. *See, e.g.*, Christopher Flavelle, *Five Ways Trump Made It Suddenly Harder to Face Climate Risks*, N.Y. Times (Jan. 26, 2025), https://www.nytimes.com/2025/01/22/climate/trump-climate-policies.html (abandoning efforts to track climate threats to the insurance and real estate markets); Michael Copley, *Trump Funding Freeze Could Leave Communities on Their Own as Climate Threats Grow*, NPR (Feb. 12, 2025, 5:30 AM), https://www.npr.org/2025/02/12/nx-s1-5285701/trump-funding-freeze-climate-change (cutting federal efforts to collect key environmental data for the public, which informs adaptation planning); Christopher Flavelle et al., *NOAA Is Told to Make List of Climate-Related Grants, Setting Off Fears*, N.Y. Times (Feb. 10, 2025), https://www.nytimes.com/2025/02/10/climate/noaa-trump-executive-orders.html (targeting climate adaptation research).
8. *See, e.g.*, Barbara Moran & Miriam Wasser, *Federally Funded Climate Projects in Mass. Face Uncertainty Under Trump*, WBUR (Feb. 3, 2025), https://www.wbur.org/news/2025/02/03/trump-solar-epa-inflation-reduction-act-energy-massachusetts (halting "community change grants" directing federal resilience investment to disproportionately burdened communities); Press Release, ReImagine Appalachia, Real-World Impacts of Trump Spending Freeze Hitting Appalachia Amid Disastrous Storms (Feb. 19, 2025), https://reimagineappalachia.org/real-world-impacts-of-trump-spending-freeze-hitting-appalachia-amid-disastrous-storms/ (cutting grants to projects with climate-resilience benefits); Declaration of Joshua Davis at 1-125, New York v. Trump, No. 1:25-cv-00039 (D.R.I. filed Feb. 11, 2025).
9. *See, e.g.*, Flavelle, *supra* note 7 (abandoning projected flood risk standards for Federal Emergency Management Agency (FEMA)- and Department of Housing and Urban Development (HUD)-funded construction, creating planning burdens for municipalities); Press Release, Environmental Defense Fund, Trump Administration's Plan Intentionally Eliminates Ability to Prepare for Next Flood (Feb. 14, 2025), https://www.edf.org/media/trump-administrations-plan-intentionally-eliminates-ability-prepare-next-flood.
10. *See, e.g.*, Gabe Cohen, *"We're Not Preparing": As Trump Officials Vow to Eliminate FEMA, the Agency Is Already in Turmoil*, CNN (Mar. 26, 2025), https://www.cnn.com/2025/03/26/politics/fema-payments-staffing-stalled-turmoil/index.html; Victoria Salinas et al., *All Resilience Is Local: Implications of Federal Devolution of Disaster Preparedness & Response*, Teneo (May 6, 2025), https://www.teneo.com/insights/articles/all-resilience-is-local-implications-of-federal-devolution-of-disaster-preparedness-response/; Alex Brown, *Trump Denies Disaster Aid, Tells States to Do More*, N.D. Monitor (May 5, 2025), https://northdakotamonitor.com/2025/05/05/trump-denies-disaster-aid-tells-states-to-do-more/.
11. *See* Safura Syed, *$140M in Grants for City Sustainability Programs at Risk From Trump Cuts*, Verite News (Feb. 13, 2025), https://veritenews.org/2025/02/13/trump-funding-freeze-sustainability/ (noting federal funding constitutes resilience office of critically vulnerable New Orleans); *see also* Flavelle et al., *supra* note 7 (hitting state government's efforts to plan for climate change).
12. *See* House Select Committee on the Climate Crisis, Factsheet: Climate Investments in the Inflation Reduction Act (2021).
13. *See* Andrew Rumbach et al., *Proposed Cuts to Federal Disaster Assistance Will Hit States Just as Hurricane Season Ramps Up*, Urb. Inst. (May 2, 2025), https://www.urban.org/urban-wire/proposed-cuts-federal-disaster-assistance-will-hit-states-just-hurricane-season-ramps.
14. *See, e.g.*, Press Release, Climate Mayors, 407 US Climate Mayors Commit to Adopt, Honor, and Uphold Paris Climate Agreement Goals (June 1, 2017), https://medium.com/@ClimateMayors/climate-mayors-commit-to-adopt-honor-and-uphold-paris-climate-agreement-goals-ba566e260097.
15. *See, e.g.*, Christina DeConcini et al., *Trump May Thwart Federal Climate Action, but Opportunities for Progress Remain*, World Res. Inst. (Nov. 13, 2024), https://www.wri.org/insights/trump-climate-action-setbacks-opportunities-us; Ayana Elizabeth Johnson, *What Now for Climate Under Trump? Act Locally*, Rolling Stone (Feb. 2, 2025), https://www.rollingstone.com/politics/political-commentary/climate-under-trump-what-now-local-1235253281/; Zack Budryk, *States, Cities Gear Up to Take Lead on Climate as Trump Returns*, Hill (Dec. 19, 2024), https://thehill.com/policy/energy-environment/5047124-trump-administration-state-local-climate-action/.
16. Defederalized climate policy cannot marshal adaptation resources at the scale of the Inflation Reduction Act and Bipartisan Infrastructure Law, which provided billions of dollars to coastal resilience measures alone. *See* National Oceanic and Atmospheric Administration, *Inflation Reduction Act*, https://www.noaa.gov/inflation-reduction-act (last updated Feb. 28, 2025).
17. *See* Christopher Flavelle, *Moody's Warns Cities to Address Climate Risks or Face Downgrades*, Bloomberg (Nov. 29, 2017), https://www.bloomberg.

Hurricane Helene in late 2024, S&P Global Ratings downgraded the credit rating of numerous flood-struck public entities across North Carolina and Tennessee for reconstruction costs and lost tax revenue.[18] Shortly after, S&P announced it would increasingly consider physical climate risks in its future ratings.[19] After the 2025 Palisades Fire in Los Angeles, it downgraded the rating of the nation's largest municipal utility and announced it would reassess the threat of climate-linked wildfires to *all* bond-sellers in California.[20]

The $4 trillion municipal bond market is essential to local government spending nationwide, financing more than 70% of U.S. infrastructure.[21] Credit rating drops increase municipal borrowing costs, making it more expensive for state and local governments to finance the climate-resilience investments they need to address growing climate risk.

State and local governments are thus in a precarious position. The federal government is abandoning support for local climate risk mitigation, while state and local governments must urgently address increasing climate threats. Under this mounting budgetary pressure, state and local governments must rely in part on private-property owners to implement necessary climate adaptation measures.[22] Private adaptation failure, however, may endanger not only those owners, but also the wider community.[23] What tools are left to compel noncompliant property owners to invest in protecting not just their own properties, but also their neighbors' and public property?

Private-law remedies might provide a solution. Public officials might enlist private law as a low-cost means to regulate climate risk from private adaptation failure. By strengthening the ability of neighbors to bring tort claims against property owners for adaptation failure, the public sector might promote private enforcement of public interests. Enabling property owners to hold other property owners accountable might help preserve public resources, reduce ordinance enforcement costs, and avoid disputes with politically influential interests.

State and local governments might provide statutory rights of action for private citizens to enforce local ordinances or to abate specific nuisances relating to climate risk management. Alternatively, they might facilitate private claims for adaptation failure by providing new rights of action or by easing requirements for negligence or nuisance claims under the existing common law. In limited circumstances, they might also consider adopting strict liability standards. Finally, local governments might simply promote public awareness of existing private rights of action where a neighbor's property is affected by others' private adaptation failures.

This Article explores these issues, mapping out a private-law approach for an era of public-sector retrenchment. Part I introduces the case study of Fort Lauderdale, Florida, to demonstrate the practical difficulties that local officials face in attempting to regulate residual climate risk. Part II then discusses the importance of private climate adaptation, and how private law might address private adaptation failure. Part III suggests some means by which the public sector might promote private enforcement against private adaptation failure, and Part IV concludes. While the Article discusses residual climate risk mitigation largely from the perspective of coastal communities in Florida, its themes apply equally to communities facing other kinds of disasters, such as wildfire risk in California.

I. Fort Lauderdale: Resilience, Adaptation, and Risk Management

Fort Lauderdale, Florida, is an example of a climate-vulnerable community facing residual climate risk. There, local officials are struggling to influence or compel private waterfront homeowners to construct seawalls adequate to prevent routine flooding of public and private property.[24] Absent policies to address private adaptation failure, however, the community will remain exposed to residual risk from sea-level rise and coastal flooding. Facing legal and practical constraints, municipal leaders must be creative in incentivizing the private action necessary to abate this residual climate risk.

A. *Fort Lauderdale and Climate Change Risk*

Fort Lauderdale is a medium-size city in Broward County, Florida, facing significant climate risk. Built along a river and with an extensive residential canal and island network, the city has a disproportionate amount of waterfront property, with more than 300 miles of waterway coastline.[25] Additionally, it is a low-lying area, with most residents living fewer than five feet from sea level,[26] and overlays a shallow, porous aquifer.

com/news/articles/2017-11-29/moody-s-warns-cities-to-address-climate-risks-or-face-downgrades.

18. Thomas Frank, *$4T Municipal Bond Market Wakes Up to Climate Risk. (With Help From Trump.)*, E&E News (Feb. 25, 2025), https://www.eenews.net/articles/4t-municipal-bond-market-wakes-up-to-climate-risk-with-help-from-trump/.
19. *Id.*
20. *Id.*
21. *Investment in the Future: Safeguarding Municipal Bonds From Climate Risk*: *Hearing of the S. Comm. on the Budget*, 118th Cong. (2024) (statement of Sen. Sheldon Whitehouse, Chairman).
22. State and local governments lack the practical or legal capacity to directly address all climate risks emerging from private property. See discussion *infra* Section II.A.
23. *See* Glenn B. Landers, Senior Project Manager, U.S. Army Corps of Engineers, USACE/Broward County Flood Risk Management Study for Tidally Influenced Coastal Areas, Presentation at Stakeholder Workshop, at 25-28 (Sept. 10, 2018), https://www.broward.org/Climate/Documents/Landers_PAS_Workshop_Broward_County_FL_Draft_2018-09-18.pdf (demonstrating how one property's insufficient seawalls may contribute to flooding across entire neighborhoods rather than being limited to single properties).
24. *See id.* (failing seawall segments exposing neighboring properties to flood risk).
25. City of Fort Lauderdale, Florida, *Climate Resiliency*, https://www.fortlauderdale.gov/government/departments-i-z/public-works/sustainability-division/sustainability-climate-resilience/climate-resiliency (last visited June 6, 2025) (noting the city's seven miles of shoreline and more than 300 miles of waterway coastline).
26. *Id.* (discussing city residents' elevated vulnerability to sea-level rise).

The city's stormwater infrastructure, meanwhile, is a half-century old and was not designed to account for climate change.[27] Many of the city's seawalls extend fewer than two feet from sea level, and many are facing the end of their usable lives.[28] Seawalls usually last about 50 years,[29] while the median construction year for Fort Lauderdale housing units is 1972.[30] All told, Fort Lauderdale faces extreme flood vulnerability from climate change, with up to 94% of downtown properties at risk of flooding over the next 30 years.[31]

Local policymakers have implemented numerous policies to defend local real estate against elevated flood and storm dangers, such as prioritizing funding for vulnerable areas, overhauling infrastructure plans, making capital project investments, and updating municipal codes to address growing risks.[32] Local policymakers can only go so far in directly managing climate risk, however, because climate change's physical risk is overwhelmingly incurred directly by private-property owners.[33] Fort Lauderdale has more than 200 miles of seawalls along its waterways, of which the city owns barely 2%.[34] Between 71% and 87% of the city's seawalls must be raised to provide sufficient flood protection,[35] while the overwhelming majority of inadequate seawalls are privately owned.[36]

Indeed, it may be beyond local government's legal or fiscal capacity to strengthen these seawalls. Legally, the city is prohibited by state law from using public funds to benefit solely private property,[37] but local policymakers also face fiscal restraints. Municipal authorities are already making massive expenditures on infrastructure, including resiliency measures. With a $1 billion annual budget, the city approved almost $1.6 billion in public capital improvements between 2018 and 2024, with $500 million allocated to stormwater drainage alone.[38] The repair costs for just city-owned seawalls will cost almost $25 million over the next decade,[39] equating to $130 worth of tax per resident.[40]

The financial burden posed by seawall needs may dwarf these municipal expenses.[41] Private-property owners (and to a negligible extent, the state) could face between $890 million and $1.8 billion in seawall construction costs in the coming years[42]—potentially double the city's annual budget and amounting to $4,000 to $10,000 in spending per resident.[43] This is not a unique problem. Florida at large has 9,243 miles of seawalls, reconstruction costs for which could potentially reach $75.9 billion by 2040,[44] likely putting reconstructing private seawalls beyond state government's capacity as well.

Meanwhile, the Trump Administration's significant reduction in federal financial support for local climate adaptation will exacerbate this financial problem.[45] Between September 2020 and January 2025, the federal government provided $25 million to Fort Lauderdale, Flor-

27. Tom Cullum, *City of Fort Lauderdale: Climate Control in a Coastal City*, N. Am. Outlook Mag. (July 9, 2024), https://www.northamericaoutlookmag.com/local-government/city-of-fort-lauderdale-climate-control-in-a-coastal-city (Fort Lauderdale's Public Works Department director discussing the city's infrastructure issues).
28. Susannah Bryan, *Fort Lauderdale on Hunt for Seawalls That Aren't Up to Snuff*, Sun Sentinel (Mar. 23, 2023), https://www.sun-sentinel.com/2023/03/23/fort-lauderdale-on-hunt-for-seawalls-that-arent-up-to-snuff/ (discussing a municipal official's warning to Fort Lauderdale's Marine Advisory Board that many existing seawalls were built fewer than two feet from sea level).
29. *Id.* (discussing general seawall life expectancy and replacement needs).
30. Point2Homes, *Fort Lauderdale, FL Demographics*, https://www.point2homes.com/US/Neighborhood/FL/Fort-Lauderdale-Demographics.html (last visited June 6, 2025) (housing stock analysis based on U.S. Census Bureau data released in the 2023 American Community Survey).
31. First Street Technology, Inc., *Downtown Fort Lauderdale Flooding Risk*, https://firststreet.org/neighborhood/downtown-fort-lauderdale-fl/66043_fsid/flood (last visited June 6, 2025) (this analysis also found flood risk to road infrastructure in Fort Lauderdale to be greater than to commercial or urban properties).
32. *See* City of Fort Lauderdale, Florida, *supra* note 25 (reviewing Fort Lauderdale's climate-resiliency plans).
33. Considering only climate change's physical risk to real estate, residential real estate alone may constitute more than 80% of the $132 trillion U.S. real estate market in 2024, far exceeding that owned by the public sector. *Compare* Statista, *Real Estate—United States*, https://www.statista.com/outlook/fmo/real-estate/united-states (last visited June 6, 2025) (describing the scale of private real estate ownership in the United States), *with* U.S. Department of the Treasury, United States Government Notes to the Financial Statements for the Fiscal Years Ended September 30, 2023, and 2022, at Note 6 (2023) (the total value of federal government land, buildings, *and* equipment amounting to $1.25 trillion in 2023, which even if combined with state and municipal assets would still likely be dwarfed by the residential real estate market). As a broader point, private spending greatly exceeds public-sector expenditures in the United States. *See* International Monetary Fund (IMF), *IMF Datamapper: Government Expenditure, Percent of GDP*, https://www.imf.org/external/datamapper/exp@FPP/USA/FRA/JPN/GBR/SWE/ESP/ITA/ZAF/IND (last visited June 6, 2025) (IMF analysis indicating that government expenditures constituted less than 37% of U.S. gross domestic product).
34. Susannah Bryan, *Crumbling Seawalls, Rising Seas: Fort Lauderdale Crackdown on the Way*, Sun Sentinel (Feb. 11, 2023), https://www.sun-sentinel.com/2023/02/11/crumbling-seawalls-rising-seas-fort-lauderdale-crackdown-on-way/.
35. Landers, *supra* note 23, at 37.
36. Bryan, *supra* note 28 (the city owning only 2% of seawalls implying overwhelming private ownership).
37. Fla. Const. art. VII, §10 (prohibiting counties and municipalities from using their taxing power or credit to aid private entities).
38. Cullum, *supra* note 27 (Fort Lauderdale's Public Works director noting municipal investments specific to climate resiliency).
39. BCC Engineering, Inc., City of Fort Lauderdale Summary Report: Seawall Master Plan, Agreement RFQ No. 456-11637, at 1 (2018).
40. Fort Lauderdale owning roughly 4.4 miles of seawalls at a repair price of $1,200 to $2,000 per foot. *See* Bryan, *supra* note 28 (detailing local reconstruction costs, while 2% of roughly 200 miles of seawalls is 4.4 miles).
41. Bob Norman, *Residents Worry Crumbling Seawalls Might Cost Them Their Homes*, Local10 (July 2, 2018), https://www.local10.com/news/2018/07/02/residents-worry-crumbling-seawalls-might-cost-them-their-homes/ (the mayor of Margate, located slightly north of Fort Lauderdale, warning that applying municipal funds to address private seawall issues would bankrupt the city).
42. According to U.S. Army Corps of Engineers analysis, between 71% and 87% of Fort Lauderdale's seawalls will require repair by 2050. *See* Landers, *supra* note 23, at 37. Fort Lauderdale likely has more than 198 miles of private seawalls, while seawalls generally cost $1,200 to $2,000 to reconstruct. *See* Bryan, *supra* note 28. With 5,280 feet in a mile, private owners may need to repair between 742,262 feet and 909,532 feet, reaching a cost range of $890,714,400 and $1,819,064,000. Estimated costs would vary from this back-of-the-envelope calculation should municipally owned seawalls be disproportionately likely to need repair.
43. *See* Cullum, *supra* note 27.
44. Center for Climate Integrity, *Florida in 2040*, https://www.climatecosts2040.org/costs/florida (last visited June 6, 2025) (Florida having the greatest seawall mileage in the nation and, correspondingly, facing the nation's highest climate change-related seawall reconstruction costs).
45. *See supra* notes 7-10 and accompanying text.

ida, for infrastructure and emergency services alone.[46] Budgetary holes of that scale are not easily filled, particularly when climate change-related expenses increasingly stretch the municipal budget.

B. *The Public Interest in Managing Private Climate Risk*

Beyond practical considerations, why should the public sector care about these enormous private costs? After all, privately incurred risk should surely be left to private individuals, who are economically incentivized to protect their homes by investing in adequate seawalls. Indeed, waterfront homeowners *should* bear privately incurred climate risks in part because they are disproportionately wealthy and could afford to bear them.

Florida's inland waterway frontage generally costs about 40% more than comparable non-waterfront housing units, creating "waterfront premiums" of roughly $330,000 to $500,000.[47] In Fort Lauderdale, those premiums appear *far* greater. Median Fort Lauderdale home sales prices are $538,000,[48] while the price for *waterfront* homes is roughly $2,000,000.[49] In other words, waterfront homes generally sell for at least 3.7 times more, indicating waterfront premiums of approximately $1.4 million. Simply put, waterfront homeowners can afford to protect their own properties, so public resources should instead focus on solely public needs.[50]

Despite this sound argument, private waterfront property risk will likely remain on the city's agenda. Policymakers are also individuals, and many city officials are personally or electorally motivated to protect the property value of influential waterfront residents. For example, all city commissioners appear to live either directly on or within two blocks of the water,[51] while more than 72% of individuals making maximum campaign contributions to the mayor's campaign lived either on or within one block of the water.[52]

Beyond political motivations, the city also has policy grounds for protecting waterfront property values. Property tax is a crucial source of municipal revenue, supporting public services like policing, fire rescue, and infrastructure maintenance.[53] Broward County has one of the nation's highest median property tax rates,[54] which annually provides nearly half of Fort Lauderdale's primary operating funds.[55] Up to $6.4 billion in Fort Lauderdale residential property may be exposed to flood events,[56] while sea-level rise may destroy $5.2 billion of the region's taxable real estate over the coming decades.[57]

Despite the obvious danger, homeowners do not appear to be internalizing these potential costs. For example, regardless of new flood risk disclosure requirements in real estate transactions,[58] the market may not currently reflect unaddressed sea-level rise risks. Some researchers have found declining demand for high climate-risk properties,[59] but Freddie Mac found no evidence of sea-level rise risks affecting current home prices.[60] Rather, demand for Florida coastal homes tripled between 2000 and 2022, despite 87%

46. Federal financial disclosures indicate the federal government made 15 nonhousing-related financial awards to the city of Fort Lauderdale between September 2002 and January 2025. These provided funding for emergency response staffing, community development grants, urban planning, and transportation infrastructure upgrades. USAspending.gov, *City of Fort Lauderdale*, https://www.usaspending.gov/recipient/511a4189-0bd1-a7db-7160-bc1bd1e2b066-R/latest (last visited June 6, 2025).
47. *See* Tatiana Borisova et al., University of Florida IFAS Extension, FE1062, Valuing Florida Water Resources: Prices of Waterfront Properties 3 (2019) (discussing property value premiums from waterfront frontage).
48. *See* Redfin, *Fort Lauderdale, FL Housing Market*, https://www.redfin.com/city/6173/FL/Fort-Lauderdale/housing-market (last visited June 6, 2025) (median home sale price being $538,000 for April 2025).
49. *See* Rich Barnhart, *Waterfront Single Family Market Watch—August 2024*, By Sea Realty (Aug. 8, 2024), https://www.bytheserealty.com/blog/waterfront-single-family-market-watch-august-2024/ (local waterfront specialist real estate firm assessing waterfront home sales price between February and August 2024 to be $1,982,000).
50. Where public resources are expended on addressing private risks, they reduce the private incentive to address that risk and might even encourage risk-taking—a situation known as moral hazard. *See infra* note 154 and surrounding text.
51. Searches using online compilations of public voter records indicate each city commissioner lives on or near the water. *See* City of Fort Lauderdale, *City Commission*, https://www.fortlauderdale.gov/government/city-commission (last visited June 6, 2025) (providing commissioner names); *see also* Voter Records, *Home Page*, https://voterrecords.com/ (last visited June 6, 2025) (enabling search for each commissioner's name, geographically limited to Fort Lauderdale); *see also* Google Maps, *Address Search*, https://www.google.com/maps (last visited June 6, 2025) (enabling measurement of identified address' proximity to river, canal, or ocean).
52. *See* Fort Lauderdale City Clerk's Office, Dean Trantalis Campaign 2024, Campaign Treasurer's Report Summary (2023), https://www.fortlauderdale.gov/home/showpublisheddocument/79814/638404969195600000 (providing a list of campaign donors for the mayor's reelection campaign); Fort Lauderdale, Fla., Mun. Code §12-4 (setting maximum campaign contribution to $1,000); *see also* Google Maps, *supra* note 51 (enabling measurement of maximum donors' address from a river, canal, or ocean).
53. City of Fort Lauderdale, FY 2025 Adopted All Funds Budget (2024), https://www.fortlauderdale.gov/home/showpublisheddocument/84579/638618243120770000 (demonstrating services paid for by the city); *see also* City of Fort Lauderdale, FY 2025 Proposed Budget 65 (2024), https://www.fortlauderdale.gov/home/showpublisheddocument/83368/638555209502170000 [hereinafter FY 2025 Proposed Budget] (property tax making up nearly half the city's General Fund revenue).
54. Tax-Rates.org, *Broward County Property Tax Rate 2025*, https://www.tax-rates.org/florida/broward_county_property_tax (last visited June 6, 2025) (ranking in the top 250 of more than 3,100 counties in order of median property taxes).
55. *See* FY 2025 Proposed Budget, *supra* note 53, at 65.
56. Landers, *supra* note 23, at 29 (with commercial real estate at potentially greater risk).
57. *See* Letter from Florida Mayors to Jeb Bush, Florida Governor (Jan. 21, 2016) (on file with the *Miami Herald*) (noting sea-level rise-related issue could wipe out up to $4 billion in taxable real estate in southeast Florida); *see also* Federal Reserve Bank of Minneapolis, *Inflation Calculator*, https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator (last visited June 6, 2025) (accounting for inflation, $4 billion in 2016 being worth $5.23 billion in 2024).
58. *See* Jennifer Bradley & Christine Hunschofsky, Opinion, *New Flood Disclosure Law Will Protect Florida Homebuyers*, Sun Sentinel (Sept. 22, 2024), https://www.sun-sentinel.com/2024/09/22/new-flood-disclosure-law-will-protect-florida-homebuyers-opinion/.
59. *See* Benjamin J. Keys & Philip Mulder, *Neglected No More: Housing Markets, Mortgage Lending, and Sea Level Rise* 18-21 (National Bureau of Economic Research, Working Paper No. 27930, 2020) (finding declining sales volumes in high-risk area but with undetermined drivers).
60. *See* Freddie Mac, Economic & Housing Research Note: Sea Level Rise and Impact on Home Prices in Coastal Florida 2 (2022), https://www.freddiemac.com/research/docs/202112-Note-SeaLevel-21.pdf.

of those homes sitting in FEMA 100-year floodplains.[61] Ultimately, homebuyers either do not know of sea-level risks, or they simply do not factor it into pricing decisions.[62]

Further, private homeowners' failures to address climate risk may endanger both their neighbors and the public. In common tidal flooding events in Fort Lauderdale, water can simultaneously overpour every stretch of insufficiently elevated seawall.[63] Flooding on the property of homeowners who fail to build sufficient seawalls seems an appropriate consequence, but this flooding can also flow into neighboring properties, sidewalks, and streets.[64] Responsibly raising one's own seawall, meanwhile, is of little benefit when one's neighbor fails to act.

Such overpour events now consistently enter private property and submerge important roadways in Fort Lauderdale.[65] Fort Lauderdale saw 178 tidal floods in 2021,[66] with coastal flooding routinely blocking access to entire neighborhoods, potentially trapping people in their homes[67] or stranding emergency rescue services.[68] Tidal flooding is now so routine the city has erected maritime traffic signage and extra-visible road markers along frequently flooded streets to prevent cars from inadvertently driving into adjacent waterways.[69] While antiquated stormwater systems or inadequate municipal seawalls may contribute to this problem,[70] Broward County has attributed this flooding to private homeowners failing to properly invest in necessary seawalls.[71]

C. *Municipal Codes Addressing Seawall Failure*

Local policymakers have recognized this unaddressed climate risk as a public problem and promoted adequate seawall construction among waterfront homeowners. In 2016, Fort Lauderdale issued an ordinance setting the minimum seawall height to 3.9 feet above sea level.[72] A few years later, a climate planning body composed of southeast Florida local governments issued new sea-level rise projections, which the Fort Lauderdale City Commission and Broward County swiftly adopted.[73] The Broward County Commission set a regionally consistent standard at five feet in early 2020, which Fort Lauderdale then had to adopt.[74]

This new five-foot standard far exceeded Fort Lauderdale's original 3.9-foot standard, and it triggered waterfront homeowner pushback.[75] Seawall construction is expensive. The average waterfront home lot in Fort Lauderdale may have 100 feet of seawall,[76] which may cost $125,000 to $200,000 to replace.[77] Far more costly than roof replacement, this could amount to 10% of the home value for median waterfront properties.[78]

Prominent local figures from waterfront communities opposed the update for its potential impact on home values,[79] with a majority of the municipal Planning and Zoning Board (all of whom lived in waterfront homes or neighborhoods) refusing to approve it.[80] Community members opposed the ordinance on the basis that it infringed

61. *Id*. at 4 (noting this methodology defines properties within 0.25 mile of the water as "coastal").
62. *Id*. at 8.
63. Fort Lauderdale policymakers readily acknowledge that seawall overpour may affect neighboring property. *See, e.g.*, Landers, *supra* note 23, at 25-28 (demonstrating how one property's insufficient seawalls may contribute to flooding across entire neighborhoods rather than being limited to single properties).
64. *See* City of Fort Lauderdale, *King Tides and High Tides*, https://www.fortlauderdale.gov/government/departments-a-h/city-manager-s-office/strategic-communications/king-tides (last visited June 6, 2025) (discussing ongoing tidal flooding impacts on public spaces).
65. *Be Aware: King Tides Have Arrived This Week*, City Fort Lauderdale (Sept. 16, 2024), https://www.fortlauderdale.gov/Home/Components/News/News/7388/ (discussing tidal flooding's regular impacts to public and private property).
66. CBS Miami, *Fort Lauderdale Eyes Plan to Raise Sea Walls*, YouTube (Mar. 22, 2023), https://www.youtube.com/watch?v=SeRNuCAtg-4&ab_channel=CBSMiami.
67. Susannah Bryan & Brooke Baitinger, *Seawall Projects Swallow Up Private Docks*, Sun Sentinel (Oct. 10, 2019), https://enewspaper.sun-sentinel.com/infinity/article_share.aspx?guid=3f6fa899-1abb-465d-bf8c-dec95ae54fa3 (discussing flooding impairing movement in the coastal Rio Vista neighborhood).
68. Fort Lauderdale's emergency services are generally located in flood-prone areas. *See* Mike Seemuth, *Venice Is Drowning*, Fort Lauderdale Mag. (July 1, 2016), https://fortlauderdalemagazine.com/venice-is-drowning/ (broadly surveying sea-level rise's various impacts on Fort Lauderdale public assets, including parks and fire stations).
69. City of Fort Lauderdale, *supra* note 64 (identifying dozens of municipal flooding measures, including "no wake" signs and vertical lane markers to demarcate waterways and roads during flood conditions).
70. *Southeast Isles Seawall Replacement Project*, City Fort Lauderdale (Mar. 1, 2024), https://www.fortlauderdale.gov/Home/Components/News/News/6847/16 (taking steps to address failing municipal seawalls along the major Las Olas Boulevard thoroughfare between the beachfront and downtown areas).
71. Broward County, Florida, Build It High, Keep It Dry (2021), https://www.broward.org/Climate/SiteAssets/Pages/USACE/SeawallDevelopers-Brochure-ADA-Web.pdf ("[I]ndividual investments have not yet fully delivered expected flood protection benefits when adjacent and nearby seawalls continue to allow the trespass of water. . . . Consistent seawall heights are necessary to protect the community from escalating impacts.").
72. *See* City of Fort Lauderdale Planning and Zoning Board, Request to Determine Consistency With the City's Comprehensive Plan, Case UDP-T22010, at 1-4 (Nov. 16, 2022) (discussing the context of Fort Lauderdale's action).
73. *Id*. at 3.
74. *Id*.
75. For example, Fort Lauderdale's Planning and Zoning Board, responding to public discontent, voted down the updated seawall code with a vote of six to three, despite acknowledging the city was obliged to meet the county's new standard. The board indicated numerous concerns, including whether the ordinance would create high costs for waterfront homeowners, would increase the number of homeowners found noncompliant, or could be waived or extended for noncompliant homeowners. *See* City of Fort Lauderdale, *Planning and Zoning Board Meeting of 9/21/2022*, YouTube (Sept. 21, 2022), https://www.youtube.com/watch?v=g9NCq0TgvKw&ab_channel=CityofFortLauderdale (board members expressing opposition despite acknowledging the update was compelled by the county).
76. *See* Vickie Arcuri Realtor, *Fort Lauderdale Waterfront Homes*, https://www.vickierealestate.com/south-florida-luxury-homes/ft-lauderdale-waterfront-homes-for-sale/ (last visited June 6, 2025) (a long-time coastal real estate specialist noting the average frontage of waterfront Fort Lauderdale properties).
77. *See* Bryan, *supra* note 28 (applying identified rates for 100 feet of seawall).
78. *See* Barnhart, *supra* note 49 (Fort Lauderdale waterfront homes selling for roughly $2 million in late 2024).
79. *See* City of Fort Lauderdale, *supra* note 75 (city board voting down the update).
80. Searches using online compilations of public voter records indicate each of the six dissenting board members at the time lived on the water or within waterfront neighborhoods. *See id*. (stating commissioner names); *see also* Voter Records, *supra* note 51 (enabling search for each member's name, geographically limited to Fort Lauderdale); *see also* Google Maps, *supra* note 51 (enabling measurement of identified address' proximity to river, canal, or ocean).

on their private-property rights.[81] As one community member memorably put it:

> When I bought this house forty years ago, there was no talk about sea-level rise or the fact that my seawall might only last fifty years. I was wondering when we started deciding that sea-level rise was the responsibility of homeowners who have lived on the water for all these years.[82]

Ultimately, the ordinance passed in 2023.[83] It requires seawalls to extend five feet from sea level, but triggers only when a homeowner is building a new seawall, addressing substantial disrepair, or permitting water to overpour into adjacent properties or public rights-of-way.[84] At first glance, this may seem an effective means to ensure seawalls are rebuilt to code as they become inadequate; however, this ordinance faces enforcement issues.

The city lacks data regarding private seawall heights and does not know where or how many private seawalls fail code.[85] The situation is further confused when individual property surveys fail to clarify which seawalls are publicly or privately owned.[86] Meanwhile, the city cannot trespass on private property to assess where seawall overpour affects neighbors. It has resorted to a hotline to report neighbors' seawall violations, and it sends code enforcement officials to patrol waterways.[87]

With hundreds of miles of seawalls and thousands of waterfront homes to monitor, direct monitoring is difficult and inefficient.[88] Where violations *are* found, homeowners receive citations and must meet code within one year or face daily fines.[89] Between the code's enactment in March 2023 and October 2024, however, Fort Lauderdale only issued 23 seawall-related citations—a small fraction of the thousands of waterfront properties likely to require seawall reconstruction over the coming decades.[90]

Fort Lauderdale typifies the challenge that residual climate risk presents to local governments. Local leaders in Fort Lauderdale must act quickly to address growing climate change threats from sea-level rise and coastal flooding. While the city invests in hardening public infrastructure, it cannot pay for necessary seawalls on *private* property. When private-property owners fail to construct private seawalls to adequate standards, however, they permit residual climate risk to threaten both public and private property.

Legally unable to control private individuals' use of their own private property, local officials have resorted to municipal code enforcement, which appears both ineffective and inefficient. Considering the legal, practical, and fiscal constraints the public sector faces, might there be low-cost alternatives to address private adaptation failure? Part II proposes that state and local governments look toward enlisting private law as a low-cost approach to incentivizing private climate adaptation.

II. Private Law as Adaptation Tool

Reducing community exposure to climate risk through adaptation necessarily requires participation by private individuals; however, traditional public policy measures can struggle to compel private-property owners to make the requisite behavioral changes or property investments. Indeed, state and local governments *should* face practical and legal obstacles to directly controlling how private individuals use their private property.

On the other hand, private landowners who fail to invest in necessary climate adaptation measures can endanger both the public and nearby private property, making residual climate risk an important local policy problem. To incentivize private climate adaptation, state and local governments can empower property owners to hold noncompliant neighbors accountable through common-law negligence and nuisance tort suits.

A. Private Adaptation and Residual Climate Risk

Climate adaptation is often discussed in terms of public policy, where governments seek to (proactively or reactively) address climate change's emerging stresses on existing governance systems.[91] With Fort Lauderdale's seawalls as one example, however, the immense scale of adaptation needs (ranging from physical property resilience to reallocation of capital to new technology adoption) will necessitate adaptation responses beyond the public sector alone.[92]

81. *See* City of Fort Lauderdale, *Tidal Barrier Ordinance Virtual Meeting*, YouTube (Feb. 2, 2023), https://www.youtube.com/watch?v=_mpZHQImWbo&t=2991s&ab_channel=CityofFortLauderdale (public callers asking questions and raising concerns with the new seawall requirement).
82. *Id.*
83. Homeowners fearing their public outcry might alert code enforcers to their inadequate seawalls may have muted opposition. *See* Bryan, *supra* note 28 (acknowledging subdued final opposition to the update).
84. Fort Lauderdale, Fla., Ordinance C-23-05.
85. *See* Bryan, *supra* note 34.
86. Norman, *supra* note 41 (multiple Margate, Florida, residents noting survey conflicts with municipal authorities over seawall ownership).
87. *See* Bryan, *supra* note 34 (noting Fort Lauderdale investing $60,000 in a patrol boat for seawall inspection).
88. *See id*. (discussing hundreds of miles of seawall to monitor); *see also* Redfin, *Housing Search: Fort Lauderdale, FL Homes for Sale & Real Estate*, https://www.redfin.com/city/6173/FL/Fort-Lauderdale/filter/include=sold-5yr,water-front,viewport=26.20053:26.02512:-79.99023:-80.18249 (last visited June 6, 2025) (Redfin assessing more than 7,000 homes sold in Fort Lauderdale in the preceding five years, with a substantial portion appearing to be on or near the water).
89. *Learn More About Fort Lauderdale's Revised Tidal Barrier Ordinance*, City Fort Lauderdale (Mar. 24, 2023), https://www.fortlauderdale.gov/Home/Components/News/News/6632/16 (clarifying enforcement officers' criteria for action and noting deadlines are extendable).
90. *See* City of Fort Lauderdale Development Services Department, *LauderBuild*, https://aca-prod.accela.com/FTL/Cap/CapHome.aspx?ShowMyPermitList=Y&SearchType=ByPermit&module=Enforcement (last visited Dec. 12, 2024) (author's review of Fort Lauderdale code enforcement records between March 2023 and October 2024 identified only 23 seawall code-related violations, including instances of overpour and disrepair) (on file with author); *see also* Landers, *supra* note 23, at 37 (indicating nearly 90% of seawalls may need to be raised by 2050).
91. IPCC, *supra* note 1, at 71 (noting adaptation to climate change by policy and legal frameworks is increasing but remains dominated by reactive responses).
92. *See id.* at 162 (discussing the essential nature of private-sector investment in enabling climate adaptation given insufficiency of public resources).

Minimizing climate change's adverse impacts is critical to adaptation.[93] Meanwhile, impacts such as wildfires or floods could cause trillions of dollars of total damages by 2050, with coastal disasters alone requiring as much as $32.5 billion in annual federal expenditures.[94] Private climate exposure extends far beyond disasters, however, including factors such as reduced economic productivity, insurance premium increases, health care costs, and similar expenses.[95] Conservatively, the cost of climate change to a person born in 2024 may amount to $500,000 over their lifetime.[96] This could exceed the total state, local, and federal taxes paid throughout the average American's lifetime today.[97]

Climate change will, to varying extents and in varying forms, affect virtually everyone, necessitating that private parties take steps to reduce their risk exposure.[98] These might range from businesses shifting supply chains to changes in health insurance policies to people opting against outdoor recreation in favor of indoor gyms.[99] The government plays a role in providing information and guidance, coordinating public actions, and incentivizing action. Ultimately, however, individuals will need to take adaptation measures themselves.[100] These vast systemic decisional shifts by private parties—often involving private property—will far exceed the technical planning capacity of the state.

Individuals have three general pathways when faced with emergent climate risks. The first is "post hoc" adaptation, involving reactive measures reducing risk exposure *after* climate change inflicts damage.[101] A homeowner building their seawall to code *after* being cited for overpour flooding of public streets would be post hoc adaptation. Second, there is "ex ante" or precautionary adaptation, a superior approach wherein parties reduce their exposure *before* incurring damage, thereby lowering climate change's total damage.[102] Building one's seawall to code to *prevent* flooding constitutes ex ante adaptation.

Meanwhile, "adaptation failure" may occur where private parties either fail to take any adaptive measures or act in ways that *increase* climate vulnerability (with the latter known as "maladaptation").[103] Fort Lauderdale demonstrates adaptation failure, with some homeowners failing to reduce flood risk exposure by building sufficient seawalls. This endangers not only their own property but also that of their neighbors and the public. It also undermines neighboring homeowners' incentives to make ex ante investments in their own seawalls, because neighboring seawalls may not protect their owners' homes where water can overpour from inadequate adjacent seawalls. This is an example of "residual climate risk," which is climate change risk that is beyond the reach of government but left unaddressed by the responsible private party.

The public sector alone is insufficient to protect communities against climate risk, necessitating that private individuals take steps to adapt to climate change. Private adaptation failure can generate residual private risk that threatens the public, however. Facing practical and legal limits to their ability to directly compel private individuals to use private property, state and local governments might instead look to private law. Private law provides an architecture through which the public sector can address private adaptation failure and deter residual climate risk.

B. *Enlisting Private Law to Reduce Residual Climate Risk*

In a climate change context, legal rules may efficiently manage relationships between parties to guide private behavior toward societally efficient outcomes.[104] Indeed, common-law tort remedies might address residual climate risk in a manner that sidesteps the limits of existing policy tools.[105] As Jim Rossi and J.B. Ruhl have noted, "The private law of torts, property, and contracts will and should play an important role in resolving disputes regarding how private individuals respond to and manage the harms of climate change that cannot be avoided through [adaptation]."[106] Private tort suits addressing climate adaptation issues have not yet emerged in full,[107] but private-law remedies provide an architecture through which society can abate and deter residual climate risk that the public

93. Climate adaptation entails adjustment of human systems to the actual or expected impacts of climate change in order to moderate harm or exploit beneficial opportunities. *See id*. at 43.
94. Office of Management and Budget, Analytical Perspectives: Budget of the U.S. Government, Fiscal Year 2023, at 278 (2022) (projecting climate change's fiscal risks to the federal budget).
95. Consumer Reports, Cost of Climate Change to an American Born in 2024, at 2-4 (2024) (discussing various economic costs imposed by climate change on private individuals).
96. *See id*. at 3 (assessing the combined net income losses and cost of living increases likely to be experienced by an American born in 2024).
97. Philip A. Trostel, *The Fiscal Impacts of College Attainment*, 51 Rsch. Higher Educ. 220, 230 (2008) (estimated total taxes paid by educational attainment, with most U.S. citizens attaining less than a bachelor's degree).
98. *See generally* IPCC, *supra* note 1, at 21-26 (discussing adaptation options to address climate change), vii-2891 (providing an overview of climate change's human impacts and global adaptation needs).
99. *See, e.g.*, *id*. at 19 (discussing risk responses by private parties to complex cascading climate risks).
100. *See, e.g.*, Arun Agrawal, The Role of Local Institutions in Adaptation to Climate Change 22-23 (2008) (discussing the role of public institutions in determining local climate adaptation responses).
101. *See* IPCC, *supra* note 1, at 71 (noting human adaptation responses are increasing but dominated by reactive measures).
102. *See generally* Jim Rossi & J.B. Ruhl, *Adapting Private Law for Climate Change Adaptation*, 76 Vand. L. Rev. 827, 860-62 (2023) (discussing the importance of promoting precautionary adaptation to climate change).
103. *See generally* Robin K. Craig, *Stationarity Is Dead—Long Live Transformation: Five Principles for Climate Change Adaptation Law*, 34 Harv. L. Rev. 4, 21-22 (2010) (discussing the importance of legal systems avoiding promoting adaptation failure).
104. Jim Rossi and J.B. Ruhl argue private law can promote more efficient adaptation to climate change, in part by promoting efficient allocation of liability between private parties, promoting liability reduction, and providing for flexibility in outcome. *See* Rossi & Ruhl, *supra* note 102, at 854-56.
105. For example, public authorities may be legally or fiscally constrained in influencing private behavioral changes or compelling changes to private property. *See supra* Section I.A.
106. Rossi & Ruhl, *supra* note 102, at 831.
107. *Id*. n.6 (assessing the Sabin Center for Climate Change Law climate change litigation databases and finding no litigation fitting the scope of an article on climate change adaptation and private law).

sector is unable to address and that private parties appear unwilling to resolve.[108]

Private tort claims can provide a welfare-promoting mechanism to shift the costs of residual climate risk away from homeowners who *do* take steps to protect themselves, and back toward the party whose responsibility it should be to manage that risk.[109] Ensuring that those responsible for residual climate risk bear the burdens of failing to act might then incentivize more precautionary behavior. And unlike public policies encouraging residual climate risk remediation, like Fort Lauderdale's code violation citations, private law allows impacted neighbors to seek personal redress through litigation. Homeowners have incentives to protect their own property from danger, and they likely have more information than the government regarding the state of neighboring properties.[110]

"Outsourcing" adaptation policy enforcement to private homeowners might enable municipal governments to avoid public backlash or concentrated political opposition from influential waterfront homeowners. Municipal governments might instead redirect political capital, financial resources, planning efforts, or staff hours toward addressing the needs of more vulnerable parts of society. Empowering local homeowners to use private legal tools to protect their own private property may allow a municipality to retain resources it might instead apply to other public interests. In this way, local government might enlist private law for public ends.

Some may oppose encouraging neighbors to sue each other for failing to address climate change, on the grounds that it might inundate courts with what effectively amounts to small-scale nuisance or negligence claims.[111] Such an outcome is unlikely, simply because municipal governments may restrict the ability to bring such cases by clarifying duties of care through municipal ordinances.[112] Enlisting private law in this manner might also have the problematic effect of shifting risk assessment responsibilities away from trained public officials and toward private homeowners. Rather than the public sector pressing individuals to address residual climate risk, private homeowners would need to assess the risk profile of their neighbors' properties to determine whether they could bring a private suit.

However, municipalities are experienced at publicizing ordinance requirements, which can set clear guidelines regarding homeowners' obligations to each other.[113] Additionally, residual climate risk can be visibly obvious to a neighboring homeowner. Determining that water is entering one's property by overpouring a neighbor's seawall does not require technical knowledge. Finally, encouraging private litigation to address residual climate risk does not require local governments to abdicate responsibility for the matter. Rather, it can serve as an additional tool to current code enforcement measures.

State and local governments may use statutes and municipal ordinances to encourage private tort litigation over residual climate risk on neighbors' property. Indeed, common-law tort remedies already appear available to those affected by neighbors' private adaptation failure, though these remedies face obstacles to effective application.

C. *Negligence Claims*

Flooding resulting from a homeowner's failure to meet a municipal ordinance can constitute a prima facie case for negligence under state law, such as in Florida. Where the defendant violated a rule (Fort Lauderdale's seawall ordinance) establishing a duty to take precautions (elevate seawall to an adequate height) to protect a particular class of persons (adjacent property owners) from a particular type of injury (flooding), the plaintiffs might plead negligence per se.[114]

Under Florida common law, landowners have a duty not to injure others in the use of their property, and they may be liable where their inaction results in damage to others.[115] Indeed, a homeowner's failure to meet Fort Lauderdale's seawall ordinance would arguably be the proximate cause of any consequent overpour flood damages, given that seawall ordinances specifically seek to prevent such damages.[116] Flooding that is attributable to failure to meet the municipal flood code would be a foreseeable consequence of that negligence, providing for recovery.[117]

Negligence claims may be suboptimal means of addressing residual flood risk, however, because negligence suits only cover a narrow range of flood conditions. Negligence suits require that plaintiffs have suffered a cognizable injury,[118] generally requiring actual property damage attributable to a neighbor's negligence.[119] In Fort Lauderdale, seawall overpour may cause routine flooding to neighboring properties without causing actual property damage. Even if a homeowner knows flooding from their neighbor's adaptation failure will inevitably cause damage to their

108. *See id.* (discussing private law's capacity to address adaptation failure).
109. *See generally* Daniel A. Farber, *Adapting to Climate Change: Who Should Pay*, 23 J. Land Use & Env't L. 1, 16-31 (2007) (discussing relative cost-shifting between parties in a climate change context).
110. Local governments can have limited knowledge as to which property owners have violated ordinances regarding climate risk. See discussion *supra* notes 85-87.
111. Rossi and Ruhl have noted a similar concern, writing that private claims for nonphysical harms like economic loss or emotional harm might open a floodgate for small claims that are difficult to adjudicate and could crowd out addressing more significant harms. Rossi & Ruhl, *supra* note 102, at 868.
112. State statutes, and local ordinances where the state has bestowed local government with such power, as in Florida, might create statutory rights and remedies specifying duties of care. *See* 38 Fla. Jur. 2d *Actions* §36 (discussing Florida jurisprudence for statutory rights and remedies).
113. *See* City of Fort Lauderdale, *supra* note 81 (city officials having organized town halls and made direct outreach to thousands of property owners).
114. *See* 38 Fla. Jur. 2d *Negligence* §87 (2024).
115. *Id.* §7 ("The common law imposes a duty on a landowner to use his or her property so as not to injure that of another.").
116. *Id.* §85 ("In order for negligence consisting of a violation of a statute or ordinance to be actionable, it must be the proximate or legal cause of the injury. . . .").
117. *See id.* §28.
118. *Id.* §32.
119. *Id.* (noting that, "as a general rule, bodily injury or property damage is an essential element of a cause of action in negligence").

property, they could not bring a suit until some degree of damage incurs.

In addition to this minimum threshold, homeowners may also see limited recovery when flooding is too severe. When floodwaters overpour a property owner's own seawalls, which may be likely in a hurricane, it might be impossible to determine that a neighbor's failure to build to code proximately caused any property damage, because that damage may have been incurred regardless. Beyond these minimum and maximum thresholds, negligence claims could not be brought *prior* to incurred damages, limiting their applicability to being a post hoc adaptation tool at best.

D. Nuisance Claims

Nuisance law, covering acts interfering with the rights of the public,[120] can induce actors to opt for socially optimal behavior by imposing liability where the costs of suboptimal behavior exceed their benefits.[121] In Florida, merely maintaining a place that tends to "annoy" the community could constitute a public nuisance.[122]

Florida municipalities may reasonably declare anything that threatens danger to public or private property—likely covering overpour flooding—to be a nuisance through municipal ordinances.[123] Similarly, common-law doctrine may restrict property rights that interfere with or injure neighbors or their properties, prohibiting individuals from using their properties in a manner creating a nuisance for their neighbors.[124] In Florida, recurrent flooding of another's land provides a basis for a private-nuisance claim.[125]

Nuisance actions provide not only for damages but also for injunctive relief,[126] and a private homeowner need only own property affected by a nuisance to be able to bring a case.[127] Critically, and unlike negligence claims, storm-related damages from seawall overpour—including from hurricanes—might not escape nuisance claims in Florida. Where a force of nature combines with a nuisance condition to cause injury, the responsible homeowner may be liable for the *combined* damages.[128] Generally, a person creating a nuisance incurs liability while that nuisance continues.[129] In sum, nuisance suits could provide for more significant recovery, the financial threat of which incentivizes potential defendants to address residual climate risk to avoid nuisance litigation.

In contrast to negligence claims, which may only be useful as a post hoc adaptation response to a relatively narrow range of flood risks, nuisance litigation can provide an ex ante remedy to compel waterfront homeowners to construct adequate seawalls. Unlike negligence litigation, which requires proximate causation and cognizable injuries, private-nuisance claims require only that the homeowner demonstrate that water has entered their property from inadequate adjacent seawalls. This low burden may incentivize defendants to settle more quickly, thereby reducing litigation burdens. And unlike negligence, which may be restricted to financial recovery, nuisance litigation can seek injunctive remedies wherein the court directly orders negligent homeowners to meet local codes.[130]

As such, homeowners might compel irresponsible neighbors to adapt in the face of climate change *before* damage occurs. That nuisance claims enable private suits to capture storm-related damages also creates a stronger financial incentive for irresponsible homeowners to build adequate storm defenses. In sum, nuisance claims may provide the strongest private common-law tool to address residual climate risk.

III. Expanding Private Enforcement Against Residual Climate Risk

Some scholars have argued that doctrinal change in private law may be necessary in the face of changing environmental baselines, in part because doctrines based on historical expectations are less applicable where precedent is less predictive of future conditions.[131] In other words, the physical and societal conditions that informed the development of common law are changing, so the common law will need to evolve. Legal innovation will undoubtedly be necessary in the coming decades; however, climate change's impacts are already occurring and will become increasingly damaging over the coming years.[132] While doctrinal evolution catches up with climate change, are there practical oppor-

120. 38 Fla. Jur. 2d *Nuisances* §5 (2024).
121. *See, e.g.*, Keith N. Hylton, *The Economics of Public Nuisance Law and the New Enforcement Actions*, 18 Sup. Ct. Econ. Rev. 43, 49-76 (2010) (describing how public nuisance law may be used to inform behavioral economics and to control societally undesirable activities, such as the use of lead paint).
122. *See* 38 Fla. Jur. 2d *Nuisances* §5 (nuisance including something that causes "any annoyance" to the community).
123. *See id.* §10 (seawall overpour being a known issue in Fort Lauderdale, while municipalities have power to declare a thing a nuisance so long as it "is one in fact").
124. *Id.* §1.
125. *See* 38 Fla. Jur 2d *Adjoining Landowners* §§4, 65 (2024) (recurrent flooding of a neighbor's property being an injury to their property rights, and injuries to neighbors' property rights being nuisance).
126. 38 Fla. Jur. 2d *Nuisances* §85 (2024) (nuisances being remediable by proceedings in equity).
127. *Id.* §91.
128. *See id.* §112 (damage to a plaintiff's house resulting from a storm still providing liability where it combines with a condition created by a defendant's negligence).
129. *Id.* §24.
130. Rossi and Ruhl have also noted that injunctive relief may be particularly important for wrongful maladaptive behavior or for failure to adapt. *See* Rossi & Ruhl, *supra* note 102, at 890.
131. *See, e.g.*, Craig, *supra* note 103, at 23-40 (discussing the need for legal innovation and adaptation in response to emerging climate adaptation needs); *see also* Rossi & Ruhl, *supra* note 102, at 830-61 (discussing the unique challenge climate change poses for legal systems and the need for common-law innovation in response to this challenge, such as by reconsidering "foreseeability" and "duty" in private law); *see also* Rashmi Dyal-Chand, *Sharing the Climate*, 122 Colum. L. Rev. 581, 586-99 (2022) (discussing climate change's challenge for traditional private-property law, and potential legal innovations to better address climate impacts); *see also* Aisha I. Saad, *Attribution for Climate Torts*, 64 B.C. L. Rev. 867, 916-22 (2023) (discussing doctrinal innovations and theories of liability to address causal uncertainty in climate tort claims).
132. *See* IPCC, *supra* note 1, at 51 (discussing increasing climate change threats to communities).

tunities to address residual climate risk within the confines of today's common law?

In Fort Lauderdale, nuisance and (to a lesser degree) negligence claims may provide for remedies able to address neighbors whose inaction leaves their neighbors exposed to residual climate risk. However, despite indications that residual climate risk may be widespread,[133] related litigation has not taken off.[134] Indeed, there may be practical obstacles to homeowners bringing such suits.

For example, a homeowner's decision to file suit over a neighbor's residual climate risk may hinge on the expected costs and outcomes of such litigation. Private litigation can be financially costly and time-consuming and, in this case, suing one's neighbors may carry social costs and cause relational damage. Meanwhile, awards or injunctions may only arrive after a time-consuming judicial process and with unclear benefits, reducing the incentive to bring such cases.

Private homeowners might be deterred from bringing cases over residual climate risk due to expected costs and unclear or insufficient outcomes. The public sector might address this problem by making private litigation easier to bring and more likely to succeed, thereby altering homeowners' cost-benefit calculus. To do so, the public sector may embrace statutory civil-action statutes, private-law statutes, liability rules, knowledge-sharing, and easier access to small-claims courts.

A. *Statutory Civil Action Enabling Private Ordinance Enforcement*

Some jurisdictions in the United States may provide for private rights of action to enforce local ordinances or to abate specific nuisances, presenting state and local governments with perhaps their greatest opportunity to address private residual climate risk.[135] In Florida, a private individual damaged by another's unlawful violation of the state's building code might initiate a private suit.[136] This would not enable recovery for Fort Lauderdale waterfront homeowners to recover against a neighbor for damage incurred as a result of that neighbor's residual climate risk, however, as that ordinance is part of its land use code.[137] Florida might amend its statutory civil-action provisions to enable enforcement of zoning violations as well.

Critically, statutory civil-action legislation might shift litigation costs away from private homeowners bringing such cases. A Florida county or municipal government may bear litigation costs associated with municipal code enforcement directly, and it might recover such costs as part of the judgment.[138] In other words, statutory civil-action laws might permit a homeowner exposed to neighbors' residual climate risk to bring a suit to directly enforce local ordinances. Rather than being a financial burden on homeowners, the local government might bear the litigation costs, which it could recover against the violating neighbor.[139] This may shift financial burdens away from responsible homeowners toward neighbors ultimately responsible for damaging others' property.

Statutory civil actions by private parties may be limited to cases involving significant incurred damage resulting from violating local ordinances, such as in Florida.[140] Unless amended to permit recovery at a lower threshold, or to provide for injunctive relief, such actions may be less useful as a mechanism to promote ex ante adaptation. Additionally, statutory civil-action legislation may be amended to permit enforcement of specific municipal codes by interest groups, creating an opportunity for numerous homeowners to pool resources to bring simultaneous cases more efficiently and systematically against homeowners with residual climate risk.[141]

Similarly, statutory causes of action addressing residual climate risk might encourage litigation by setting minimum awards for successful recovery. These enhanced penalties could approximate a "Pigouvian tax," which is a fee correcting for negative public externalities generated by certain activities (residual climate risk, in this case).[142] Minimum penalties, even where private adaptation failure has yet to damage neighboring property, might encourage landowners to internalize the community risk their adaptation failure creates.

As an alternative to minimum statutory damages, state or municipal governments could provide a "bounty" for successful suits.[143] Though such de facto subsidization might encourage litigation, this approach is less effective than setting minimum statutory damages. "Bounties" require public funding, making public enlistment of private law less cost efficient. Further, "bounties" do not effectively fine landowners' inaction, making such measures

133. *See* Landers, *supra* note 23, at 37.

134. *See* Rossi & Ruhl, *supra* note 102, at 831 n.6 (finding no widespread adaptation-related tort litigation); *see also* City of Fort Lauderdale Development Services Department, *supra* note 90 (finding minimal Fort Lauderdale code enforcement citations).

135. *See, e.g.*, Ohio Rev. Code Ann. §§303.24, 519.24, 713.13 (West 2024) (providing for private landowners' right to sue for neighbors' violations of zoning statutes); *but cf*. Cohen v. Superior Ct., 322 Cal. Rptr. 3d 62, 711-12 (Cal. Ct. App. 2024) (California appeals court overturning a prior holding providing for private rights of action for local ordinance violations).

136. Fla. Stat. §553.84 (2024) (providing for statutory civil action).

137. Fort Lauderdale, Fla., Ordinance C-23-05.

138. Fla. Stat. §162.30 (2024) (providing for civil action to enforce municipal ordinance).

139. *See id.* (litigation costs being recoupable from defendants).

140. Fla. Stat. §553.84 (2024) (requiring material damages for such actions).

141. *See generally* Scott Ferron, *Suing for the City: Expanding Interest Group Enforcement of Municipal Ordinances*, 50 Colum. Hum. Rts. L. Rev. 220 (2018) (discussing the potential utility of municipal third-party private rights of action).

142. Pigouvian taxation in a climate change context often focuses on incorporating the social cost of carbon into fossil fuel costs, enabling prices to internalize long-term externalities. This logic also applies to climate adaptation, wherein Pigouvian taxation might address negative externalities from private adaptation failure. *See generally* Robin Döttling & Magdalena Rola-Janicka, *Too Levered for Pigou: Carbon Pricing, Financial Constraints, and Leverage Regulation* 5-10 (European Central Bank, Working Paper No. 2812, 2023).

143. *See generally* Scott W. Stern, *Moral Nuisance Abatement Statutes*, 117 Nw. U. L. Rev. 613 (2022) (discussing Texas' moral nuisance abatement statute allowing private persons to sue others for performing, assisting, or abetting abortion).

less effective at financially incentivizing necessary private adaptation investment.

In sum, statutory civil action might allow homeowners and community interest groups to directly enforce municipal ordinances, financially incentivizing ex ante adaptation by shifting litigation costs to the most appropriate party.

B. *Private-Law Statutes for Nuisance and Negligence*

State private-law statutes might also facilitate private suits over neighbors' residual climate risk. While statutory civil action may create a civil enforcement mechanism for municipal ordinances, private-law statutes may amend the form and requirements for nuisance and negligence tort litigation. State legislation may set specific standards of care regarding a homeowner's unaddressed climate risk, which can create private causes of action for negligence somewhat independent of the regular common-law standard.[144] In Florida, for example, state law permits private individuals to sue in the name of the state to enjoin specific statutory nuisances without needing to show any specific injury.[145] Private-law statutes might effectively allow citizens to act in the name of the state where they could be otherwise dependent on enforcement by public officials.

Where state common law considers ordinance violation to constitute per se negligence, such as in Florida, local governments might write municipal codes specifically intended to meet those legal criteria. In Fort Lauderdale, when a homeowner violates a municipal ordinance establishing a duty to take precautions to protect their neighbors from a specific risk (like flooding), plaintiffs might plead negligence per se.[146] This standard-setting is not limited to residual climate risk involving seawalls, but could be enacted by municipalities addressing a variety of climate risks that require reasonable precautions, like brush-clearing to abate wildfire danger.[147]

In "home-rule" states like Florida, where state governments have granted local governments significant autonomy, municipalities might stipulate behaviors they consider a nuisance.[148] Florida municipalities may include such regulations within their code of ordinances, while the state government has also declared more than a dozen activities to be public nuisances as a matter of law.[149] Explicit clarification of activities declared to be public nuisances, as well as whom such declarations intend to protect, may make nuisance claims more likely to succeed where that protected group is adversely affected by the identified nuisance.

Clarifying adaptation obligations through local rules may also have efficiency benefits in providing locally applicable guidance regarding appropriate levels of care to address climate risk. Clarifying which thresholds provide a basis for private recovery may help homeowners avoid wasteful investments in precautionary adaptation measures that may ultimately be ineffective.[150] However, municipal ordinances developed by planning officials with technical expertise can set clearer guidelines regarding cost-effective and prudent measures.

In other words, private-law statutes can enable state and local governments to establish clear standards of care for climate adaptation, enabling private enforcement against residual risk through negligence and nuisance claims while ensuring locally appropriate and efficient adaptation.

C. *Liability Rules*

State government may adopt "strict liability" statutes to protect certain classes of people from activities they are unable to influence or from which these classes cannot protect themselves.[151] Strict liability statutes are usually exceptional, and generally apply only against activities the government has significant interest in deterring.[152] Such statutes effectively shift all liability for certain actions (or inaction, as may be the case with residual climate risk) to specific parties, potentially removing plaintiffs' obligations to take reasonable care for themselves.[153] Applying strict liability for damages associated with residual climate risk to irresponsible property owners can create an enormous financial incentive to address such risks comprehensively and quickly.

However, strict liability rules reduce or eliminate potentially affected parties from taking reasonable precautions regarding their own risk.[154] If one knows a neighboring seawall is inadequate, that homeowner should be encouraged to minimize flood risk on their own property, such as by moving vehicles or elevating valuables. Where strict liability is adopted, otherwise responsible homeowners have no incentive to take reasonable precautions. Rather, strict liability statutes might create moral hazard wherein property owners deliberately increase their exposure to risk with the understanding that their neighbors would bear the risk. For example, under strict liability, a homeowner might

144. *See* 38 Fla. Jur. 2d *Negligence* §84 (2024) (describing requirements for statutes creating private rights of action in negligence).
145. *Id.* §93.
146. Such instances match the state's general requirements to bring negligence actions for violations of statutes or ordinances. *See id.* §87.
147. Taylor, *supra* note 3.
148. *See* 38 Fla. Jur. 2d *Counties & Municipal Corporations* §§100, 252.
149. *See* Fla. Stat. §823 (2024) (listing activities rendered nuisances as a matter of law).
150. *See* Rossi & Ruhl, *supra* note 102, at 855-56 (discussing wasteful investments in adaptation).
151. *See* deJesus v. Seaboard Coast Line R.R. Co., 281 So. 2d 198, 200-01 (Fla. 1973) (discussing the role and purpose of "strict liability" in Florida law).
152. *See generally* 38 Fla. Jur. 2d *Negligence* §91 (2024) (describing Florida's use of "strict liability" statutes).
153. *See id.* (strict liability requiring the defendant to protect not only plaintiffs who are exercising reasonable care, but also those who are contributorily negligent).
154. *See* Rossi & Ruhl, *supra* note 102, at 878-79 (discussing moral hazard issues arising where strict liability is applied for adaptation purposes); *see also* Mark Nevitt & Michael Pappas, *Climate Risk, Insurance Retreat, and State Response*, 58 Ga. L. Rev. 1603, 1614-17 (2024) (discussing insurance as another area where public policy measures addressing adaptation needs can promote adverse moral hazard); Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 Harv. L. Rev. 1089 (1972) (generally discussing liability rules).

intentionally leave their car parked in an area they know will flood due to their neighbor's inadequate seawalls, with the goal of making their neighbor buy them a new car.

Statutes applying strict liability may also automatically create situations where a property owner is exposed to immense financial liability during the period between their falling within the strict liability statute and their taking the necessary precautions to exclude themselves from it. In Fort Lauderdale, code enforcement gives homeowners with inadequate seawalls one year to come into compliance; strict liability rules might make homeowners liable for that entire year, even if their seawall only just fell into disrepair.

Similarly, strict liability for residual climate risk might plausibly pose a catastrophic financial risk when such liability regimes intersect with extreme weather events. In Fort Lauderdale, for example, a broadly written statutory strict liability standard regarding residual flood risk could expose the irresponsible homeowner to the full cost of reconstructing their neighbors' homes should a hurricane exacerbate overpour conditions.

Where state governments or authorized municipal governments consider enabling private recovery under a strict liability standard, they must be exceedingly careful with how they craft such legislation. This would entail clarifying the exact obligations owed by a property owner, to whom that obligation is owed, and the specific measures necessary to fulfill that obligation, and providing reasonable allowances to property owners making good-faith efforts to meet their obligations. Strict liability rules would also likely raise costs on homeowners, given their increased financial risk exposure, consequently exacerbating potential political opposition.

D. Knowledge of Potential Liability

Critically, both responsible and irresponsible homeowners may lack information regarding the financial implications of failure to address residual climate risk. Public research regarding the extent of potential physical damage resulting from failure to address known risks (despite municipal requirements) might clarify parties' financial exposure. A homeowner made aware of the financial threat posed by their neighbor's private adaptation failure may be more likely to bring litigation. Conversely, an otherwise irresponsible homeowner is more strongly incentivized to voluntarily reduce residual climate risk should they be aware of their potential liability. Private legal entrepreneurs might also recognize an opportunity in advising wealthy waterfront homeowners regarding these issues, creating a financial incentive for law firms to spread awareness of private-law remedies.

It might also not be evident to homeowners that private-law remedies are available to them, particularly where the public sector also appears to be addressing the problem.[155] Municipal governments might counteract such efforts by informing waterfront homeowners of their potential legal claims against irresponsible neighbors, who may subsequently fear civil liability and take the initiative in addressing those risks.

State and local governments might also reduce litigation costs involving residual climate risk by increasing access to small claims courts. For example, the state government could increase the monetary limit for small claims (which in Florida is $8,000, exclusive of costs).[156] State courts might also amend statutory rules for small claims courts to ensure they may provide equitable relief and permit self-representation, which may enable a homeowner—absent currently quantifiable property damage—to more easily bring a nuisance suit for a neighbor's residual climate risk without hiring an attorney.[157]

E. Distributional Concerns

This Article discusses residual climate risk in terms of what private waterfront homeowners in Fort Lauderdale have left unaddressed. That group is disproportionately wealthy and could likely afford the fines, damages, or legal fees for which it is de facto responsible.[158] However, some waterfront homeowners may also be of modest means and lack the resources to adopt climate precautions, particularly where seawall reconstruction exceeds the total value of their homes.[159] In low-income or marginalized communities, homeownership can be essential to developing generational equity,[160] and these communities may already be under disproportionate pressure from climate change.[161]

The pathways discussed here to deploy private law to address residual climate risk could therefore inequitably saddle more vulnerable residents with litigation costs and financial liability for what might effectively amount to mere zoning violations. Where state and local governments

155. Fort Lauderdale officials launched an intensive communication effort to contact more than 8,000 waterfront homeowners regarding the updated seawall ordinance, and it took steps to solicit neighbors reporting adjacent seawalls not meeting code. This could plausibly give homeowners the impression that the city government is solely responsible for addressing the issue. *See* City of Fort Lauderdale, *supra* note 81 (discussing Fort Lauderdale's outreach efforts).

156. 38 Fla. Jur. 2d *Courts & Judges* §272.

157. *See id*. (Florida's small claims court emphasizing monetary damages, potentially limiting their utility in addressing nuisance flooding issues).

158. *See supra* notes 47-50 and accompanying text.

159. *See* Norman, *supra* note 41 (lower-income residents in a south Florida town being unable to afford seawall reconstruction).

160. *See, e.g.*, Cedric Herring & Loren Henderson, *Wealth Inequality in Black and White: Cultural and Structural Sources of the Racial Wealth Gap*, 8 Race & Soc. Probs. 4, 4-17 (2016) (discussing the role of homeownership in building generational wealth); *but cf.* Scott N. Markley et al., *The Limits of Homeownership: Racial Capitalism, Black Wealth, and the Appreciation Gap in Atlanta*, 44 Int'l J. Urb. & Reg'l Rsch. 310, 310-16, 323-24 (2020) (discussing the limits of homeownership in explaining and addressing the racial wealth gap).

161. *See, e.g.*, United Nations Climate Change Katowice Committee on Impacts, Impacts of the Implementation of Response Measures on Intergenerational Equity, Gender, Local Communities, Indigenous Peoples, Youth, and People in other Vulnerable Situations 10-11 (2024) (generally describing disproportionate exposure of marginalized communities, such as minorities and the poor, to climate change's impacts); *see also* IPCC, *supra* note 1, at 70 (noting uneven distribution of risks toward disadvantaged communities at all levels of development).

consider measures encouraging private litigation to compel adaptation, they risk contributing to inequitable financial burdens.[162] Distributional consequences should therefore inform the public sector's approach to this problem.

States might, for example, draft statutory civil-action legislation to cap total recovery or otherwise limit liability in certain circumstances. Alternatively, municipal ordinances applied in statutory civil actions may set higher burdens in wealthy areas than in those with fewer resources. In some circumstances, state or local governments may zone lower-income waterfront areas into unique districts, wherein local government might permit homeowners to cede their seawalls (and subsequent financial liability) to the city. Local or state governments might also provide financial support for vulnerable communities through public redevelopment funds, helping them to address adaptation needs before incurring any liability.[163]

Policymakers should exercise the variety of means at their disposal to tailor the application and accessibility of private-law remedies to residual climate risk.

IV. Conclusion

Fort Lauderdale demonstrates the adaptation challenge posed in addressing privately incurred climate change risks that endanger the surrounding community when private-property owners fail to address them. Public policy tools, like municipal ordinances, can seek to address such residual climate risks, but such approaches may be limited by budgetary constraints, political opposition, enforcement problems, or private-property rights. Amidst the federal pullback from climate-resilience policy, policymakers can seek to enlist private law as a complementary climate adaptation strategy by empowering nearby property owners to bring common-law nuisance or negligence claims over their neighbors' adaptation failures.

State and local governments have various means to encourage property owners to exercise private-law remedies against neighbors whose adaptation failure puts everyone at risk. For example, they could provide for private enforcement of public ordinances. Alternatively, they might make it easier for private parties to bring and succeed in private tort actions by clarifying and defining private adaptation-related duties and remedies. They could increase public awareness of private-law remedies and clarify the scope of potential liability, or carefully tailor liability rules to ensure the parties responsible for damages from unaddressed residual climate risk bear proper financial liability. However, state and local governments must be careful to consider the distributional implications of any such measures.

As climate change intensifies and the Trump Administration pulls back from climate adaptation and resilience policy, state and local governments must find practical ways within their existing authorities to incentivize private climate adaptation. The measures outlined here provide politically feasible, low-cost, near-term opportunities to leverage private law to fill a critical gap in climate adaptation policy. Private common-law doctrine will inevitably evolve in response to climate change's unique challenges. But in the interim, state and local governments need not wait to address residual community risk resulting from private climate adaptation failure. Fortunately, they have the tools to act now.

162. *See generally* Farber, *supra* note 109, at 16-31 (discussing relative cost-shifting between parties in a climate change context).

163. *See* Norman, *supra* note 41 (Margate using a public redevelopment fund supplied by private capital to address seawall issues in modest neighborhoods).