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Sea-Level Rise and Infrastructure: A Challenge for Local Government

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Sea-level rise (SLR) and climate change (CC) can harm major infrastructure in many ways. In Florida, the first and biggest concerns are drainage systems that are no longer as effective at preventing flooding—or have themselves become the cause of flooding—and the impact of increased erosion and higher water levels in damaging roads. While this article focuses on Florida local governments, the dynamics—and the laws—have analogues and similarities in most states in the United States.

Sea levels are rising and will continue to rise at increasing rates for hundreds of years. Flooding of properties, decreased drainage efficacy, and loss or degradation of infrastructure due to SLR all cost local government money—lots of money. Only the largest and most well-resourced local governments at risk may be able to bear the burden of the long-term infrastructure costs to protect all their areas and residents. Many local governments have begun to accept this reality.

When a city street floods, backs up into homes, and causes harm, is the city responsible? In which instances and why in those instances and not others? Previous legal analysis in the Florida context concluded that the city would likely not be responsible as long as the primary cause of the flooding was a combination of SLR and a local government decision not to upgrade the system.

However, if property owners could demonstrate that the flooding occurred due to operational negligence, such as lack of maintenance of the storm water system, then the city would likely be liable. As sea levels continue to rise and overwhelm more and more drainage systems that localities cannot afford to upgrade to address changing sea levels, millions, indeed billions, of dollars of losses through property damage and loss of property value will occur. If liability hinges on a distinction between a responsibility to “maintain”
drainage systems versus no legal responsibility to “upgrade” such systems, what is the difference?

First, courts have found that state entities—whether federal, state, or local—have the same responsibility to avoid negligent behavior that causes harm to others as people generally have under civil tort laws of negligence. If the steps into my house are rotted, and you come to visit, fall through the rotted steps, and are injured, I may be liable. Similarly, if a local government’s drainage system falls into disrepair and my house floods because of this disrepair, the local government will likely be liable for my damages. In Florida, like in many states, the state and some state subdivisions had enjoyed sovereign immunity from such negligence/tort lawsuits. Florida, again like many states, has waived sovereign immunity for certain negligence cases. This means that people that have been harmed may sue local government for damages the same as if a private person had caused the harm. Second, from a policy perspective, it seems reasonable to hold local governments liable for not maintaining infrastructure as people have come to depend on that infrastructure.

On the other hand, courts seldom allow liability against local governments for decisions not to upgrade existing infrastructure or build new infrastructure. From a practical perspective, this is due in part because citizens do not have a right to depend on state entities creating new infrastructure. Second, and most importantly, courts seek to not involve themselves in “legislative” decisions of state entities. The Founding Fathers separated our government into three branches—legislative, executive, and judicial—to avoid tyranny by any one branch of government. This structure gives birth to what courts refer to as the “separation-of-powers doctrine,” which holds that no one branch of government should exercise the powers of another branch. Decisions about when, where, and how to build new infrastructure are quintessential examples of the legislative power to make challenging policy decisions that balance factors such as need, impacts, available funds, and other public policy considerations. Thus, courts seek to avoid, whenever possible, imposing liability on state or local governments for exercising such legislative discretion as this would put the courts in the role of the legislative branch.

Even acknowledging a distinction between a duty to safely maintain infrastructure and no duty to create new infrastructure or upgrade existing infrastructure, what distinguishes “maintenance” from an “upgrade”? When a drainage system no longer functions effectively due to higher sea levels, is this a “maintenance” or “upgrade” scenario? It sounds more like a need for an “upgrade” since the system will need a new design to provide the same level of drainage provided when the system was operating with lower sea levels. And what about a road that is now frequently underwater due to
SLR? Or a road that is repeatedly eroded away by higher sea levels resulting in more erosion and wave action? To date the author has not seen case law that squarely presents these questions. But some legal cases have come close, and the case law to date remains unclear as to the determinants of government legal liability for SLR impacts on infrastructure.

The case of Jordan et al. v. St. Johns County presented a situation of which Florida is already beginning to see increasing numbers: coastal roads more frequently damaged due to ongoing erosion exacerbated by higher sea levels. The Jordan case never actually mentions SLR. Nonetheless, it is an important case as it examined the legal responsibility of local governments in Florida for road maintenance. In Jordan, Florida’s Fifth District Court of Appeals confronted a case in which decades of erosion and undermining of about 1.6 miles of road had eliminated much of the road surface and in some areas even the dry land on which the road had existed. Property owners sued for the county’s failure to “maintain” the road. The Florida Fifth Circuit Court of Appeals held that the county had the responsibility to provide “a reasonable level of maintenance that affords meaningful access.”

While the Jordan case hinged on the local government’s duty of “maintenance” of the road at issue, the appeals court seemed confused in how it used the word “maintenance.” As noted, “maintenance” has a specific meaning as a term of art in law; the duty of local governments to “maintain” infrastructure is carefully distinguished in law from the discretionary power—but not obligation—of local governments to upgrade, redesign, or build new infrastructure. In Jordan, it is not at all clear whether the court was using the words “maintain” and “maintenance” as specific terms of art in the legal profession or whether the appeals court was using them as any non-lawyer might use them in ordinary conversation. This makes a big difference. As commonly understood, “maintain” means things like “to keep in an existing state (as of repair, efficiency, or validity): preserve from failure or decline” and “to sustain against opposition or danger: uphold and defend” and “sustain.”

Such definitions would certainly seem to imply that a local government duty to “maintain” a road means doing whatever is necessary to keep the road in place and functioning.

But in law, the meaning of “maintain” and “maintenance” is much narrower. Florida courts have limited the duty of “maintenance” for which local governments can be held liable under tort law to only those activities deemed to be “ministerial,” “non-discretionary,” or “operational” whereas “basic judgmental or discretionary government functions are immune from [tort] actions.”

In the Jordan case, even the duty to maintain—properly understood as a ministerial function—would not have led to liability for the county in the case had the court not also concluded that the claim that the county’s inaction in fulfilling this duty could
support a claim based on the U.S. Constitution’s Fifth Amendment protections of property rights. 

Allowing the claim that the county’s failure to meet its duty of “maintenance” be viewed as a potential property takings claim shortcircuited the sovereign immunity protection in tort law that government typically enjoys for discretionary government functions. But not all courts agree that disputes about “maintenance” should be allowed as property takings claims that skirt issues of sovereign immunity and separation of powers.

SLR will make keeping drainage and roads functioning as they have in the past an increasingly expensive endeavor for local governments. Court decisions on whether doing so represents “maintenance” or “discretionary,” “planning-level decisions” will determine whether local governments are subject to liability for not keeping infrastructure functioning as it used to prior to SLR and CC. Recent case law remains divided on the crucial legal issues that will determine potential governmental liability for infrastructure in the face of rising seas. What is included in the “duty to maintain” infrastructure? Can complaints about failing to meet the “duty to maintain” lead only to tort claims—and hence usually fail due to sovereign immunity—or can they also be presented as takings claims? If courts allow plaintiffs to bypass sovereign immunity by allowing takings claims, can this be squared with the separation-of-powers doctrine?

End Notes

1. Often similar legal rules govern state and even federal entities.


3. *See, e.g. Slemp v. City of North Miami*, 545 So. 2d 256, 258 (Fla. 1989); *Southwest Fla. Water Management Dist. v. Nanz*, 642 So. 2d 1084, 1086 (Fla. 1994) (“Having assumed control of this drainage system and undertaken to operate and maintain said drainage system, [d]efendants, and each of them, had a duty and obligation to prudently operate, control, maintain, and manage said system so that it would work properly and drain off excess waters so as not to cause flooding in the area. Defendants owed said duties and obligations to your [p]laintiffs, residents and/or owners of homes and real property serviced by the drainage system.”).

4. There are, of course, exceptions to this general rule. The most important is the role of courts in assessing liability to state entities for violations of constitutionally guaranteed protections.
63 So. 3d 835 (Fla. Dist. Ct. App. 2011). This author has written a lengthy article that carefully dissects this case and critiques the appeals court’s decision. Readers interested in a more in-depth understanding of the legal, practical, and policy implications of the case are encouraged to review Thomas Ruppert, *Castles—and Roads—in the Sand: Do All Roads Lead to a “Taking”?*, 48 Envt’l L. Rep. 10914 (2018). This article includes some significantly abridged and simplified points from the longer article. In addition, for a comparative analysis of the legal duties of state, county, and local governments pertaining to roads in the southeastern United States, see Shana Campbell Jones et al., *Roads to Nowhere in Four Jurisdictions: States and Local Governments in the Southeast Facing Sea-Level Rise*, 44 Colum. J. Envtl. L 67 (2019).


7. Merriam-Webster on-line dictionary definition of "maintain."

8. *See e.g., Pollock v. Fla. Dep’t of Highway Patrol*, 882 So. 2d 928, 933 (Fla. 2004) and *Polk County v. Sofka*, 803 So. 2d 751, 754 (Fla. Appeals Ct. 2001). (As a general rule, decisions involving the installation of traffic control devices, the initial plan and alignment of roads, or the improvement or upgrading of roads or intersections are judgmental, planning-level functions to which absolute immunity attaches. [citing Dept of Transp. v. Neilson, 419 So. 2d 1071 (Fla. 1982)].)

9. While the U.S. Constitution’s Fifth Amendment applies only directly to the federal government, its protections have been applied to the states through interpretation of the Fourteenth Amendment. *Chi., Burlington & Quincy R.R. Co. v. Chicago*, 166 U.S. 226, 241 (1897).


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