Two types of elevating can be considered tools for adapting to sea-level rise (SLR). First, there is the possibility of elevating the ground level of entire areas through the use of fill, thus raising buildings and roads. Beach nourishment is also a type of elevation of land. Second, elevation may occur through elevation of buildings on pilings, which is usually categorized as a type of “accommodation” of rising seas. Second, there is elevation of structures to protect them from flooding.

ELEVATING LAND

A plethora of problems present themselves when contemplating elevation of ground level to raise land and structures in an area to accommodate increasing sea levels. First, in areas where some development has already taken place, it could be difficult to find a legal hook that would allow local governments to require private property owners to elevate the land they are on. Even where this hook exists—such as a landowner requires a permit—this opportunity for the local government to ensure elevation of land would occur only on a parcel-by-parcel basis. Private parcels that elevate their land and cause flooding on adjacent parcels can be held liable under nuisance law, even if elevation of the property is required by law. Potentially the only way to avoid legal wrangling over flooding and drainage might be to elevate entire areas at once.

Elevation of an entire area has been utilized in the United States before: much of Galveston Island was raised after the great storm of 1900 that devastated the island and killed 8,000 people on the island. In addition to building a massive sea wall, parts of the city were raised up to

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2 Florida Sea Grant, Coastal Planning Specialist.

seventeen feet in elevation. While the City of Galveston paid for elevating gas and water lines, streets, and other public infrastructure, property owners were responsible for raising their own buildings. The project cost millions of dollars and took eight years to complete, during which time residents had to deal with pumps, dredges, wooden walkways, transportation difficulties, mosquitoes, and the stink, which was reportedly terrible. Further research on the practical and legal issues confronted by this undertaking is warranted.

Despite vast improvements in the past century to the equipment needed to undertake such projects today, it is not clear whether a similar effort today would be legally and practically feasible. It may be that changes in attitudes, expectations, and law about property use, inconvenience, and costs would result in significant resistance—politically and legally—to such a project even if the project were considered to be in the best interest of the community.

Due to changes in expectations and law, might it be necessary today for the government to pay for private property owners to elevate in order to avoid a takings claim during area-wide elevation of ground level? This might be the case as typically government agencies only force private parties to elevate structures or land when the government has a legal “hook” to do so because the property owner requires a permit for a related activity.

Additionally, it is far from certain that local governments would be able to shoulder the costs of large-scale elevation of land, even if the local government were not responsible for elevating private structures. One potential financing tool to consider in such situations might be a special development district—structured like a drainage district—that would be paid for by the taxes of those living in the area. Even under such a scenario, attempts to institute area-wide ground elevation efforts will face challenges.

Another option might be for local governments to forgo efforts to force property owners into elevating their own property and simply focus on roads and public infrastructure. However, even this approach offers no safe haven for local governments as raising public roads and infrastructure may result in constitutional or Bert Harris claims. Case law indicates that government is liable if its direction of water onto property denies the property owner beneficial use of the property, such as when the government elevates a road and changes drainage patterns that result in flooding land. Private parcels using fill to elevate and causing increased flooding on adjacent parcels may also be held liable under nuisance law.

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5 Drake v. Walton County, 6 So. 3d 717, 720-21 (1st DCA 2009); Thompson v. Nassau County, 343 So. 2d 965, 966 (1st DCA 1977).

6 Kendry v. State Road Dep't, 213 So. 2d 23 (4th DCA 1968). See also, Hansen v. City of Deland, 32 So. 3d 654, 655 (5th DCA 2010) (noting that a county takes private property when it directs a
ELEVATING BUILDINGS

The potential for legal challenges should be very low as elevating buildings to protect people and property is a common practice already in use for many years. Elevating new structures presents very few takings issues as this has long been an accepted requirement in many flood-prone areas. The National Flood Insurance Program (NFIP) allows building on the fringe of flood areas if structures are at least elevated to the base flood elevation (BFE). Any additional height above the BFE is called freeboard. Elevating structures above BFE when doing new construction actually presents an opportunity for property owners to spend a relatively small additional amount of money for extra elevation during construction in exchange for yearly savings on flood insurance premiums. Freeboard requirements are actually one of the most common ways that communities can save money on flood insurance rates in the community through credits in the NFIP’s Community Rating System.  

Elevating existing structures presents greater challenges. Again, if a permit is needed for reconstruction due to damage or for expansion/significant repairs or alteration, the local government may already have an existing policy for whether or not the structure must be modified to meet existing standards. While not impossible, elevation may not be feasible for many existing slab on grade and masonry structures due to cost.

Cost may also be a determinant of the political feasibility of instituting elevation standards for private structures. Direct costs may be borne by the private sector where elevating structures is required through building codes, but effectiveness hinges on adequate enforcement.

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