

# WATER LOG

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## Eleventh Circuit Upholds Denial of Dock Relocation Request on Cumberland Island

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**Also,**

Who Should be in Charge?: The Ongoing Saga of Catfish Inspections

Mississippi Court of Appeals Bars Lawsuit Against Conservation Officers

Thinking Strategically About Flood Mitigation

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## Inside This Issue . . .

Eleventh Circuit Upholds Denial of  
Dock Relocation Request on  
Cumberland Island ..... 3

Who Should be in Charge?: The Ongoing  
Saga of Catfish Inspections ..... 6

Mississippi Court of Appeals Bars Lawsuit  
Against Conservation Officers ..... 9

Thinking Strategically About Flood  
Mitigation ..... 11

*Cover photograph of a creek on Cumberland Island;  
courtesy of the Homeschool Traveler.*

*Contents photograph of sand patterns on Cumberland  
Island's shore; courtesy of Toby Past.*

## • UPCOMING EVENTS •

### **2017 Mississippi Bar Annual Meeting & Summer School**

July 10-15, 2017  
Sandestin, FL

<http://bit.ly/msbar2017>

### **2017 Alabama State Bar Annual Meeting**

July 12-15, 2017  
Point Clear, AL

[www.alabar.org/about-the-bar/annual-meeting](http://www.alabar.org/about-the-bar/annual-meeting)

### **147th Annual Meeting of the American Fisheries Society – Fisheries Ecosystems: Uplands to Oceans**

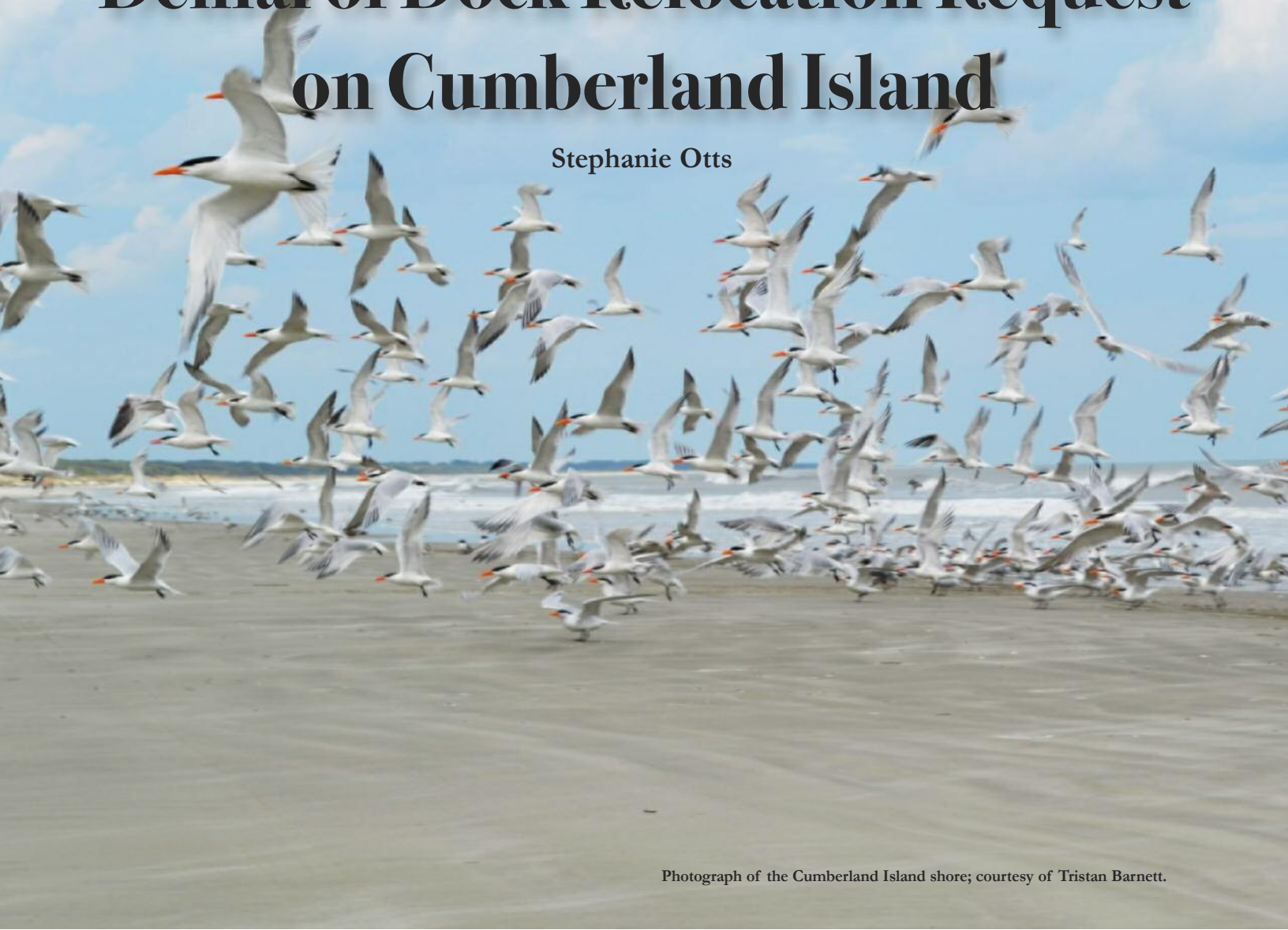
August 20-24, 2017  
Tampa, FL

<https://afsannualmeeting.fisheries.org>



# Eleventh Circuit Upholds Denial of Dock Relocation Request on Cumberland Island

Stephanie Otts



Photograph of the Cumberland Island shore; courtesy of Tristan Barnett.

**Cumberland Island, Georgia's largest barrier island,** was once the private playground of wealthy industrialists, most notably the Carnegie family. Although Cumberland Island continues to attract the rich and famous – John F. Kennedy, Jr. was married at the Greyfield Inn, a converted historic mansion still owned and operated by the Carnegie family – it now belongs to all of us. The federal government began acquiring land from private property owners on Cumberland Island in the early 1970s, and Congress established Cumberland Island National Seashore in 1972.

Acquisition efforts continued after the seashore designation, and the federal government now owns a significant portion of the island.

The enabling legislation for Cumberland Island National Seashore authorized the Secretary of Interior to acquire lands within the boundaries of the national park through a variety of means, including purchase and donation. As part of these negotiations, the Secretary could grant private property owners a right of use and occupancy for noncommercial residential

property. A long running dispute between the National Park Service (NPS) and a family with reserved rights on Cumberland Island recently reached the Eleventh Circuit Court of Appeals.<sup>1</sup>

### Brick-Kiln Dock

Charles Chandler, son of Coca-Cola founder Asa Candler, purchased property on the northern end of Cumberland Island in 1930. The Chandler family's holding eventually increased to 1,300 acres and included a 38-acre parcel known as the High Point Compound. In the 1950s, the Chandlers sought and received permission from the Carnegie family to build Brick-Kiln Dock in one of their tracts of land to provide easier access to the Compound. The dock, which is located on Hawkins Creek approximately 3.5 miles and a 15-minute drive from the Compound, provided deepwater access to the island.

The Chandler family agreed to convey its property to the NPS in 1982. The sale agreement reserved the family's right to occupy High Point Compound and use Brick-Kiln Dock until the death of the last surviving named shareholder of the family corporation (High Point LLLP). Due to natural changes in tidal flows that have increased siltation around the dock, downstream portions of Hawkins Creek are currently too shallow for passenger vessels to navigate. According to the Chandlers, Brick-Kiln Dock will soon "be completely unusable as a deepwater dock."

In June 2008, High Point sought permission from the NPS to move the dock to a more navigable bend in Hawkins Creek, approximately 50-100 yards away. The NPS denied the request on the ground that the deed conveying the property to the federal government did not grant High Point a right to move the dock. In the absence of such a grant, the NPS asserted that the Wilderness Act of 1964 prohibited relocation of the dock.

Congress mandated that Cumberland Island National Seashore "be permanently preserved in its primitive state," although some limited development is allowed within the seashore to facilitate public recreation.<sup>2</sup> In 1982, Congress designated 8,840 acres of seashore as wilderness under the Wilderness Act and 11,718 as potential wilderness. In 2004, Congress

amended the wilderness boundaries to encompass 9,886 acres of designated wilderness and 10,500 acres of potential wilderness. The land upon which a portion of Brick-Kiln Dock sits is designated wilderness, and the marshlands under the dock are designated potential wilderness. With limited exceptions for existing public rights, no structures are allowed within designated wilderness areas.

Proposals floated back and forth among the parties for years. High Point proposed alternative locations or the extension of the existing dock. The NPS suggested that family members and their guest could gain access via the island's public docks or High Point could improve conditions by dredging Hawkins Creek. High Point argued that use of the public docks was unacceptable because it would force the family to compete with the public for dock space and increase travel time to the Compound by 30 minutes to 1 hour. High Point dismissed the dredging option as too expensive.

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When the NPS declined to reconsider its decision after a 2012 request, High Point filed suit. High Point sought judicial review of the NPS's denial of High Point's request under the Administrative Procedure Act (APA). High Point also challenged the authority of the NPS to regulate the state-owned marshlands under the dock. The district court sided with the NPS, finding that the deed prohibited High Point from moving the dock without the NPS's permission and that the Wilderness Act prohibited the NPS from authorizing construction in a wilderness area. The

district court also quickly dismissed High Point's claim that the NPS had no authority over the marshlands. The NPS has clear statutory authority to regulate non-federal lands within the boundaries of national parks. High Point appealed to the U.S. Court of Appeals for the Eleventh Circuit.

### Reserved Rights

On appeal, the Eleventh Circuit reviewed the language of the deed conveying High Point's property to the United States. High Point argued that the deed unambiguously reserved to High Point the right to unilaterally move Brick-Kiln Dock to maintain deepwater access. High Point's argument was based primarily on two provisions. High Point first cited the deed's express reservation to High Point shareholders of the use "of the area presently known as Brick-Kiln Dock located on Hawkins Creek in Tract N-5."<sup>3</sup> The deed also provided that buildings or structures "deteriorated by the elements ... may be maintained, repaired, renovated, remodeled, or reconstructed so long as the basic character of the building or structure is not materially altered."<sup>4</sup> High Point was essentially urging the court to broadly interpret these clauses to find a reserved right to use the entirety of Tract N-5 for deepwater access and permission to reconstruct the dock in a different location within Tract N-5.

The court was not persuaded that the deed language supported High Point's broad interpretation. As for the first provision, the court stated that a "straightforward reading of the deed language demands the conclusion that High Point reserved only a right to *use* – not to move or extend – the Dock as it was 'presently known' at the time of the conveyance."<sup>5</sup> The court found the second provision inapplicable, as the relocation or extension of Brick-Kiln Dock would materially alter its basic character. High Point's reserved rights are therefore limited to the use of Brick-Kiln Dock as it existed at the time of the conveyance and NPS approval is required for significant alterations.

### NPS Denial of Relocation Request

After concluding that High Point was required to seek NPS approval to move or extend Brick-Kiln Dock, the court turned to High Point's claim that the agency's

denial of their request was arbitrary and capricious under the APA. The Wilderness Act requires federal agencies to preserve the "wilderness character" of designated wilderness areas.<sup>6</sup> No structure or installation is permitted within a wilderness area, unless it falls within one of two exceptions. Structures may be allowed if "subject to existing private rights" or "necessary to meet minimum requirements for the administration of the area."<sup>7</sup>

High Point argued that the NPS had the authority to permit relocation or extension of Brick-Kiln Dock, because it had a private right of deepwater access to Cumberland Island. The court disagreed, reiterating that the deed reserved only a right to use Brick-Kiln Dock. The deed does not contain any reference to a broader right of deepwater access. The only "existing private right" held by High Point is in the use of Brick-Kiln Dock itself. The NPS's denial of High Point's request on the basis of the Wilderness Act was therefore not arbitrary and capricious.

### Conclusion

Battles between private property owners and the NPS within national parks are more common than one might imagine. Acquisition of land for national parks happens in many different ways, both before and after the creation of the park. As illustrated by this case, the language of the deed conveying the property to the federal government will control the outcome of most disputes. It is therefore critically important that conveyance documents accurately and clearly express the terms of the negotiated agreement between the property owners and the NPS. 🐼

*Stephanie Otts is the Director of the Mississippi-Alabama Sea Grant Legal Program at the University of Mississippi School of Law.*

### Endnotes

1. High Point, LLLP v. National Park Service, 850 F.3d 1185 (11th Cir. 2017).
2. 16 U.S.C. § 459i-5(b).
3. *High Point*, 850 F.3d at 1194.
4. *Id.* at 1194-95.
5. *Id.* at 1194.
6. 16 U.S.C. § 1133(b).
7. *Id.* § 1133(c).



# Who Should be in Charge?: The Ongoing Saga of Catfish Inspections

Alexandra Chase

**Catfish is ubiquitous in Southern cuisine.** Traditionally fried and served up with hush puppies, fries, and coleslaw, this Southern staple at one time came from farms in only a few Southern states. Catfish devotees, however, may be surprised to learn that the majority of catfish consumed in the United States today is imported from Asia. This influx of imported catfish has lowered prices and negatively impacted the profitability of domestic producers.

As imports of catfish have increased, so have concerns over contamination risks. In 2008, in response to growing pressure from the U.S. catfish industry and consumer safety groups, Congress passed legislation transferring catfish inspection duties from the Food and Drug Administration (FDA) to the U.S. Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS).

## Background

Catfish is almost exclusively a farm-raised product. Catfish farming represents 57% of aquaculture production in the United States.<sup>1</sup> Commercial catfish farming started to grow in the 1960s when profit margins for cotton, rice, and soybeans decreased and Southern farmers began replacing income from staple crops with catfish ponds. Even though foreign competition has resulted in a decline of the domestic catfish industry in the last few decades, catfish still remains a valuable agricultural product. The sales of domestic catfish growers, predominately located in Alabama, Arkansas, Mississippi, and Texas, exceeded \$380 million in 2016.<sup>2</sup>

Domestic catfish production, however, faces stiff competition from foreign imports which have steadily increased in recent decades. In the early 2000s, the United States and Vietnam resumed formal trade relations, and

Vietnam increased the exportation of several native species of catfish from the family *Pangasiidae* known as *basa*, *swai*, and *tra*. Between 2003 and 2012, U.S. catfish imports increased from 5.5 million pounds to over 238 million pounds.<sup>3</sup> The lower prices of imported catfish fillets gave Asian catfish farmers a competitive advantage over domestic producers. By 2012, 78% of all frozen catfish fillets sold in the United States were imported.<sup>4</sup>

Many countries exporting catfish to the United States lack the environmental, animal welfare, and public health protections present in the United States. Fish farms in China, Vietnam, and other countries are often located in areas where water supplies are at risk of contamination from pesticides, human and animal sewage, and industrial waste. Crowded conditions in ponds contribute to the spread of disease. Many of the chemicals and antibiotics used by fish farmers to treat ponds and sick animals are banned for use in the United States on animals produced for human consumption.

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In 1995, the FDA adopted regulations requiring processors of fish and fishery products to adhere to Hazard Analysis Critical Control Point (HACCP) principles.<sup>5</sup> Importers must take steps to verify that the imported fish or fishery products are processed under conditions equivalent to those required of domestic producers.<sup>6</sup> Imported products lacking the required assurances regarding processing



Photograph of a catfish; courtesy of Nik Wilet.

conditions are considered adulterated and will be denied entry into the United States.<sup>7</sup>

To ensure the safety of imported seafood products, the FDA conducts inspections of foreign seafood processors, domestic importers, and collects samples upon entry. Given the incredible volume of imported food coming into the United States, it would be impossible for the FDA or any other agency to inspect and test every shipment. That said, the FDA physically inspects and samples a very small percentage of imported seafood products. In 2009, for instance, the FDA sampled only .1% of imported seafood products for drug residue.<sup>8</sup> Critics cited this low inspection rate as one of the major reasons for the transfer of catfish inspections duties to the USDA.

### USDA Inspections

As a result of the 2008 and 2014 Farm Bills, the FSIS now inspects fish from the order *Siluriformes* under the Federal Meat Inspection Act. The catfish inspection program became effective on March 1, 2016, with implementation phased in over an 18-month transition period. Full program implementation is expected by September 1, 2017.

The regulations establish both a domestic and foreign inspection program. Foreign countries seeking catfish importation must prove that their laws, regulatory programs, and standards are equivalent to USDA standards, subject to FSIS onsite visits. To date, ten countries have started the equivalency process – Bangladesh, China, Dominican Republic, El Salvador, Guyana, India, Jamaica, Nigeria, Thailand, and Vietnam.<sup>9</sup>

### Rejections and Recalls

Since FSIS took over inspections on April 15, 2016, the number of catfish imports that have been rejected, rerouted, or recalled has increased. While several rejections were for paperwork anomalies, the majority of rejected imported catfish or catfish products were for serious food safety violations. Serious catfish food safety violations that occurred were “problems with the product’s labels ... fail[ed] physical inspection for defects and adulteration or laboratory analysis for chemical/drug residues or pathogens.”<sup>10</sup>

In the past year, FSIS has issued two domestic recalls for illegal chemical contaminants and one recall for an imported catfish product that bypassed inspection



procedures. On July 14, 2016, FSIS issued a product recall of 21,521 pounds of catfish products from a Louisiana facility for illegal chemical contaminants and 1,650 pounds of imported products that bypassed inspection procedures in California.<sup>11</sup> On March 24, 2017, FSIS issued a product recall of 1,695 pounds of catfish products from a Mississippi facility because the catfish products contained illegal chemical contaminants.<sup>12</sup>



Photograph of a catfish; courtesy of Charlene N. Simmons.

## Conclusion

Although the USDA program has had marked success in stopping contaminated catfish from reaching consumers, the program's future is uncertain. In May of 2016, the Senate passed a resolution to return catfish inspections to the FDA. Senators John McCain, Jeanne Shaheen, and Kelly Ayotte argued that the USDA program is expensive and an example of duplicative regulation.<sup>13</sup> New data may allay the Senate's concerns as the USDA catfish inspection program costs relatively little by federal standards, just \$1.1 million annually.<sup>14</sup> Transferring the authority back would also be expensive and potentially waste agency resources. The House of Representatives has not scheduled a vote on the Senate's resolution. 🐟

*Alexandra Chase is the Ocean and Coastal Law Fellow with the National Sea Grant Law Center at the University of Mississippi School of Law.*

## Endnotes

1. ANDRE F. MILLER AND HAROLD F. UPTON, CONG. RESEARCH SERV., U.S. CATFISH INDUSTRY AND FOREIGN TRADE: A FACT SHEET, R44177 at 1 (2015).
2. U.S. Dep't of Agric., [Catfish Production](#) (Feb. 3, 2017).
3. Miller and Upton, *supra* note 1, at 3.
4. Terry Hanson and Dave Sites, [2012 U.S. Catfish Database v](#) (2013).
5. U.S. Food and Drug Administration, Procedures for the Safe and Sanitary Processing and Importing of Fish and Fishery Products, Final Rule, 60 FED. REG. 65096 (Dec. 18, 1995) (codified at 21 C.F.R. Parts 124 and 1240).
6. 21 C.F.R. § 123.12(a).
7. *Id.* § 123.12(d).
8. [Letter from Dianne Feinstein, et al., U.S. Senator, to Gene L. Dodaro, Comptroller General](#), U.S. Government Accountability Office, Attachment 1 (April 25, 2017).
9. U.S. Dep't of Agric., [FSIS Equivalence Status Chart](#) (May 9, 2017).
10. [USDA Rejections of Imported Meat, Poultry, Egg Products and Catfish](#) (August 2016).
11. Press Release, U.S. Dep't of Agric., Haring Catfish, Inc. Recalls Siluriformes Fish Products Due to Possible Adulteration (July 14, 2016).
12. Press Release, U.S. Dep't of Agric., Lakes Farm Raised Catfish, Inc. Recalls Siluriformes Fish Products Due to Possible Adulteration (Mar. 24, 2017).
13. Press Release, U.S. Senator John McCain, Senate Passes McCain-Shaheen-Ayotte Resolution Disapproving Wasteful Catfish Inspection Program (May 25, 2016).
14. Press Release, U.S. Congressman Rick Crawford, House Members Denounce Senate Catfish Vote (May 26, 2016).



# Mississippi Court of Appeals Bars Lawsuit Against Conservation Officers

Stephanie Otts



Photograph of the Tchoutacabouffa River; courtesy of the Land Trust for the Mississippi Coastal Plain.

**In the summer of 2009, tragedy struck on the** Tchoutacabouffa River in Harrison County, Mississippi. A boater fleeing from Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) conservation officers collided with another boat, killing the driver and seriously injuring a passenger. Family members of the victims (collectively “the plaintiffs”) filed suit for wrongful death against the MDWFP under the Mississippi Torts Claim Act, alleging the conservation officers acted with reckless disregard for the safety of the victims and other boaters using the river. Following a bench trial, the

Harrison County Circuit Court ruled against the MDWFP and awarded judgment to the plaintiffs in the amount of \$500,000. The MDWFP appealed.

## **The Traffic Stop**

On August 22, 2009, two MDWFP conservation officers witnessed a boater, Donald Bernius, speeding in a boat on the Tchoutacabouffa River. The officers, who were in two separate patrol boats, approached Bernius’ boat to investigate and Bernius came to an initial stop in the middle of the river. According to the officers, the stop

occurred in a dangerous stretch of the river where blind spots made it difficult for boaters to see other boaters approaching in opposite directions.

To eliminate a potential hazard to boaters, the officers ordered Bernius to move to a safer location. One officer proceeded ahead to block oncoming traffic, and the other directed Bernius to follow him. Bernius initially complied with instructions, but then abruptly turned and fled. The collision occurred shortly thereafter. A blood sample drawn from Bernius at the hospital two hours later indicated that his blood-alcohol concentration (BAC) was .25 percent – three times the legal limit. Bernius pled guilty to boating under the influence and is currently serving a twenty-year prison sentence.

### Liability

A government generally cannot be brought into a court of law without its consent. Governments, including state governments, have sovereign immunity from lawsuits unless authorized by law. The Mississippi Torts Claim Act (MTCA) sets forth the claims that may be brought against a governmental entity or its employees in Mississippi. Under the MTCA, the MDWFP and its officers may not be held liable for any claim arising out of the actions of an officer engaged in execution of law enforcement activities “unless the [officer] acted in reckless disregard of the safety and well-being of any person not engaged in criminal activity at the time of injury.”<sup>1</sup>

The Harrison County Circuit Court focused on the decision of the officers to direct Bernius to move his boat. In the court’s opinion, the officers acted with reckless disregard by permitting Bernius to continue operating his boat after being stopped for speeding. The court found that the officers’ instructions to Bernius violated the MDWFP’s Standard Operating Procedures (SOPs) for Boating Under the Influence (BUI) situations. SOP 04/01, for example, requires citations to be issued “at the scene” and SOP 07/03 states that an officer’s “effort to establish probable cause for BUI will be after an [o]fficer’s stopping of watercraft...”<sup>2</sup> Although the officers testified that they did not observe signs of intoxication at the initial stop, the court questioned this testimony in light of Bernius’s BAC and the reports of others witnesses claiming to have smelled alcohol on Bernius after the accident. The court faulted

the officers for not questioning Bernius about the speeding or possible use of alcoholic beverages immediately after the stop. The court concluded that the officers’ decision “was made with a deliberate disregard for the risk.”<sup>3</sup>

On appeal, the MDWFP argued that the circuit court misapplied the reckless disregard standard. A divided Mississippi Court of Appeals agreed. The court gave greater weight to the officers’ testimony regarding their observations of Bernius during the initial stop and their concerns about the blindspot and desire to quickly move the boats to a safer location. The court found the officers “possessed the discretion to request that Bernius pull out of the hazardous and high-traffic area of the river.” The court reversed the decision of the circuit court and concluded that the evidence failed to show the officers acted in reckless disregard.

Several justices dissented from the majority opinion. The dissenting justices argued the evidence supported a finding of reckless disregard due to the officers’ failure to take steps to determine whether Bernius was intoxicated and to properly control him after making contact.

### Conclusion

Law enforcement officers routinely make split-second decisions. In hindsight, it can be easy to pass judgment. This is especially true when a traffic stop results in the death of an innocent person. The bar for defeating sovereign immunity, however, is set pretty high. As indicated by the dissenting opinion, these cases are not easy to resolve. The plaintiffs won the first round. The MDWFP won the second. It is unknown at this time whether the plaintiffs intend to appeal to the Mississippi Supreme Court and fight a third round. 🦋

*Stephanie Otts is Director of the Mississippi-Alabama Sea Grant Legal Program at the University of Mississippi School of Law.*

### Endnotes

1. MISS. CODE ANN. § 11-46-9(1)(c).
2. Mississippi Department of Wildlife, Fisheries, and Parks v. Webb, 2017 WL 1396686 at \*3 (Miss. Ct. App. Apr. 18, 2017).
3. *Id.*
4. *Id.* at \*11.



# Thinking Strategically About Flood Mitigation

Stephen Deal



A view of the flooded Mississippi River in Concordia Parish, Louisiana; courtesy of Edward Stojakovic.

**Flooding is the costliest type of disaster in the United States** and America has suffered more than \$260 billion in damage between 1980 and 2013.<sup>1</sup> Given the scale and scope of flooding across the nation, all potential lines of defense should be considered and deployed as appropriate to help flood-prone communities adapt. Elevation and fortified construction aren't the only flood mitigation options in the community planning toolbox. There are numerous other techniques and strategies that, when applied appropriately, expand the range of responses available for managing flood risk.

Good city planning is as much programmatic as it is based on building standards and setback rules. Incorporating a novel urban tactic or assessing how the urban form may be modified or expanded upon can have a catalytic impact. Through constant revision and refinement a city may, in effect, reprogram itself as new resilience techniques and practices get embedded in the cultural fabric of the city. There is considerable value in a city assessing workaround solutions, such as temporary infrastructure and well-managed site planning, as part of its overall resilient flood planning process because it allows for new avenues and pathways for recovery to open up in the face of sudden calamity or change.

## The Lasting Value of Temporary Buildings

One aspect shared by both natural and urban systems is that they have emergent properties. At the beginning, small variables are introduced. Over time, these changes lead to rich, complex communities supported by an intricate web of feedback loops and mutual support networks. Jane Jacobs realized this when she wrote:

Cities, again like the life sciences, do not exhibit *one* problem in organized complexity, which if understood explains all. They can be analyzed into many such problems or segments which, as in the case of life sciences, are also related with one another.... they are not helter-skelter; they are “interrelated into an organic whole.”<sup>2</sup>

This paradigm shift has profound implications for how one goes about solving urban problems. The type of solutions required within such a framework is not simple templates or formulas, but rather “catalytic changes to a network of dynamic relationships.”<sup>3</sup> When a city is perceived as one dynamic, interrelated system it becomes



Re:START City Mall made of shipping containers in Christchurch, New Zealand.

possible to see how a simple urban installation or temporary development can have lasting value. Their value is derived from the way in which they directly engage the informal array of creative and institutional relationships that give rise to an urban system.

To break this down even further, a temporary structure, in the right situation, can be an experiment in determining how resources can be allocated more efficiently over a dynamic urban network. Some planners have labeled these types of changes as incremental or tactical urbanism and they may be pivotal in addressing the challenge of organized complexity within a city. Tactical urbanism aims to improve the urban fabric through quick, temporary projects, which may be deployed strategically across the entire city. Two techniques employed within tactical urbanism that may have catalytic potential for flood-prone cities are shipping containers and food trucks.

### Shipping Containers

Aside from their general connection to working waterfronts, shipping containers retain a number of key advantages that make them highly suited to providing urban amenities in flood-prone cities and towns. For one thing, shipping containers are, in some respects, fortified modular boxes. They can be stacked on top of each other or arranged in rows to create a small retail plaza. Shipping containers range between ten and forty feet long and because they start their life as industrial storage they are generally tested for strength and durability. A 40-foot shipping container, for example, can generally hold about 40,000 pounds.<sup>4</sup> They are also fairly mobile, because they are designed and fitted with devices that allow for quick and easy transport. Their strength and mobility are strong selling points for today's urban professional, which is why shipping containers have blossomed into a commonly used urban redevelopment technique over the past few years.<sup>5</sup>





The DaBayou Bar and Grill in Ocean Springs, Mississippi.

Shipping containers have been used in innovative ways in two Gulf Coast communities to maintain a strong connection to the water while still addressing flooding concerns. The DaBayou Bar and Grill, in Ocean Springs, Mississippi, utilized retrofitted shipping containers when it was constructing a new restaurant in the Gulf Park neighborhood.<sup>6</sup> The containers are retrofitted with hurricane straps, bolts, and reinforcements as required by MEMA and FEMA. Bolts and other reinforcements help keep the structures anchored on the ground, so they can resist flotation or lateral movement.<sup>7</sup> Also, if a hurricane were to threaten the region, the restaurant can disconnect all its electrical and plumbing devices, pack the restaurant into one container and have it moved off on a flatbed.

The DaBayou restaurant was inspired by a similar concept in Orange Beach, Alabama. The Gulf Restaurant in Orange Beach consists of four shipping containers, averaging 40 feet high and 8 feet wide.<sup>8</sup> One of the containers houses the kitchen, while another container is being used as a second-level observation deck. The shipping containers, according to project developer Johnny Fisher, had been purchased for around a few thousand dollars a piece from Southern Truck in Theodore, Alabama.<sup>9</sup> The Gulf Restaurant is not intended to be a permanent fixture of Orange Beach, but is rather a workaround solution until a nearby bulkhead can be repaired.

## Food Trucks

Another solution, which provides catalytic urban change while still being readily mobile, is food trucks. Food trucks and other forms of mobile vending are an important fixture of a resilient, urban ecosystem. Acclaimed urban theorist Jane Jacobs theorized that newer urban areas that lacked a dynamic street life could benefit greatly from the presence of street vending carts because they provide low cost, low overhead space – space that in a more established community would be provided by old buildings.

Some cities are home to food truck pods, locations where multiple trucks convene on one site. The pod idea has recently taken off in the city of Portland, which has no rules against redeveloping vacant or private lots for mobile vending purposes.<sup>10</sup> In 2012, Portland had more than 20 food truck pods scattered in different sections of the city. Even if food trucks are not fully embraced by a city, their seasonal use in local events or for temporary placemaking projects can provide a lot of insight into an area's potential capacity for further redevelopment. With minimal investment, a coastal community could develop a food truck pod, or similar concept, as an accessory use to a waterfront park or deploy it more strategically as a way of gauging future demand for waterfront investment.



Photograph of a food truck in Portland, Oregon; courtesy of Stu Spivack.

Conceptually, food trucks offer the same basic advantages as shipping containers, but with considerably more mobility. A food truck may have a dedicated neighborhood or pod it frequents, but it is every bit as mobile as your average automobile. Even if a few food truck owners opted to have a single location, the infrastructure generally required for such an undertaking is light and simple, such as outdoor seating and restrooms, and the main components of the development, the food trucks, still retain complete mobility.<sup>11</sup> It's also worth noting that a wide range of regulatory options are available for regulating food trucks, so cities can be as aggressive or conservative with a food truck rollout as they wish to be. Although many coastal communities may lack experience with food trucks, they offer a practical alternative for urban experimentation in flood-prone regions. A food truck pod may be regulated in a manner similar to RV parks. Preparedness toolkits for mobile home and RV parks can provide useful models for weaving disaster preparedness and evacuation planning into the existing food truck pod model.<sup>12</sup>

### Cluster Houses in a Creative Manner

A study by the Urban Land Institute (ULI) indicates that 54% of the multifamily market is made up of properties that have between two and forty-nine units to them.<sup>13</sup> These numbers attest to the idea that resilient cities contain a rich mixture of buildings, small, medium and large, that can be recombined and repurposed into many different combinations. Larger developments often result in more expensive housing. For example, according to the ULI study, a development of 40-49 units rents for about \$948 on average, while rentals with two units average a rent of \$750.

Considering that small, multifamily units have the potential to both increase a city's overall building mixture and deliver units more cheaply to the market, this should be an area of further focus for coastal communities. A major hurdle coastal communities face implementing small, multifamily projects is that elevation requirements generally lack adequate guidance for retrofitting attached or mixed-use structures. This was a key finding of a report compiled by the New York City Planning Department on flood mitigation in the wake of Hurricane Sandy.<sup>14</sup> In order to have a flood resilient community that is attainable

for both seasonal workers and visitors, it becomes important to consider how multifamily dwellings and coastal elevation requirements can be merged into one single urban arrangement.

**A major hurdle coastal communities face implementing small, multifamily projects is that elevation requirements generally lack adequate guidance for retrofitting attached or mixed-use structures.**

One way to satisfy this unmet demand for small, multifamily developments is by constructing a number of small, separate units centered on an elevated porch or courtyard. One unique example of this is Mayfair Lane, in Buffalo, New York, where an elevated common area conceals parking underneath.<sup>15</sup> The entire property fits on just a little under two-thirds of an acre of land and, by one measure, achieves a density of over 42 units an acre. Mayfair Lane manages to create beauty within its elevated profile, but is also quite dense as well.

A scaled down version of this approach can be found in Pascagoula, Mississippi's Anchor Square development. Though intended for commercial use, Anchor Square takes a novel design approach as it features several retrofitted Katrina cottages elevated several feet above ground level. Each cottage faces an elevated boardwalk, which has the effect of disguising their high profile.<sup>16</sup> Such an arrangement retains the intimacy of small home living while dispersing the maintenance costs of elevating across multiple, income-producing units.

In England, one developer has proposed a particularly ingenious solution of having a home that is both modular and elevated. Architect Bill Dunster seeks to redevelop the city of Oxford's park and ride sites with eco-friendly "pod homes," which will be elevated over the parking facilities.<sup>17</sup> The tiny structures average around 74 square feet and, according to the homes' developer, may be installed at a price of around 55,000 and 60,000 pounds. Renderings of a fully developed complex of pod homes show a common porch running down the middle. Because they're modular, the pods may be forklifted to another location. These examples illustrate how innovative proposals to elevate





Postcard illustration of a Bungalow Court in Los Angeles, California.

multifamily housing provide for a level of interdependence and promote sustainable urbanism in a way that is difficult to come by in elevated single-family structures.

### Conclusion

The challenges posed by flooding are too pervasive for a one size fits all approach. That is why it is important to call upon a plethora of solutions that, in effect, serve to reprogram the city. In order to effectively reprogram a place, communities must develop redundant systems and implement multiple approaches. Temporary structures, for example, do not need to be fortified structures to be resilient. Mobility can also help a region rebound quickly from potential shocks and stressors. Good site planning for multifamily housing can serve to make elevated infrastructure feel like a collective asset for multiple tenants. These strategies, when employed as part of a larger system of flood mitigation measures, can have real value because they expand the capacity of a city to adapt and evolve to sudden, cataclysmic change. In a complex system such as a city, where each social relationship may have hidden importance, adaptation to change can occur on multiple lines and may take on different permutations, so it stands to reason that multiple strategies are needed to craft a truly resilient and sustainable coastal community. 🐼

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### Endnotes

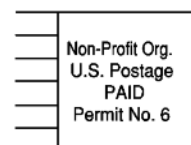
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