

# Regional Flood Protection Governance in Louisiana

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## Executive Summary

This report summarizes the findings of an analysis of levee districts in Louisiana with particular emphasis on the Greater New Orleans Area and the Southeast Louisiana Flood Protection Authorities (SLFPA), SLFPA-East and SLFPA-West. The report documents the major sources of revenue for levee districts including a detailed review of property taxes and the potential revenues that could be generated by extending the constitutional authority to levy a basic tax to all districts. The report also includes a review of historical expenditures and the outlook for future expenditure needs in the Greater New Orleans Area to identify potential areas of improvement in regional management of flood risks to ensure community and economic vitality in this part of the state.

### Key findings:

- Revenues supporting local levee districts totaled roughly \$201m annually in recent years.
- Property taxes make up 60% of all revenue utilized by levee districts in Louisiana.
- Of the 30 existing levee districts or entities functioning as a levee district included in this study, 11 do not have constitutional authority to levy a property tax or do not choose to impose a property tax under existing constitutional authority.
- Resetting the constitutional authority to 5 mills for all districts not currently levying a tax at or above that threshold has the potential to generate an additional \$63.3m in revenue annually.

### Recommendations:

- The constitutional authority to levy a property tax of up to 5 mills should be extended to all levee districts to provide a minimum level of funding to each levee district and facilitate broader local investments in flood prevention.
- An independent process for establishing “shared purpose” should be established to provide guidance to local districts in negotiating projects that may provide benefits beyond a single jurisdiction.
- Take all possible measures to ensure that regional levee authorities are representative of the diverse local population while continuing to value a range of expertise and experience.

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## Introduction

Managing flood risk is a problem that Louisiana has wrestled with for generations. As with other natural disasters, such as earthquakes, wildfires and severe weather, mitigating risks requires some level of engagement by government at the federal, state, and local levels. This report provides an overview of the governance and financing of levee districts in Louisiana, with particular attention to the region surrounding the City of New Orleans. Additionally, this report examines the potential fiscal and budgetary impact of changes to levee district organization and funding.

Flood risk management and prevention is a collaborative effort with responsibility shared between federal, state, and local agencies. This shared governance is often referred to as a patchwork quilt, with overlapping program goals and outcomes patched together to create a system of risk reduction.<sup>1</sup> The federal government maintains over 120 programs related to flood risk management.<sup>2</sup> These programs include multiple federal agencies with differing responsibilities leading to complex relationships for risk reduction.<sup>3</sup> Federal programs include a range of support for flood protection, including but not limited to, regulation of levees along navigable waterways, direction of much-needed resources during and after storms, and provision of a wide array of other technical and financial assistance.

Federal risk reduction programs are often set up to encourage local and state governments to plan for future disaster scenarios, yet the federal approach is limited.<sup>4</sup> While there are many federal programs in place, much of the responsibility for protecting communities and maintaining flood control infrastructure devolves to the state and local level. However, flood hazards and geophysical systems do not respect political boundaries. Without regional governance and cooperation, wide-ranging flood protection and hazard mitigation can be hard to achieve.<sup>5</sup> Shared governance can reduce disasters while streamlining risk management.<sup>6</sup> Governance includes “enabling statutes, organizational and financial resources, programmatic structures, and administrative rules and routines” that create the structure to advance policy objectives.<sup>7</sup> Inherently a political process that is constantly evolving, governance involves both

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<sup>1</sup> P. J. May and R. E. Deyle, “Governing Land Use in Hazardous Areas with a Patchwork System,” in *Cooperating with Nature: Confronting Natural Hazards with Land-Use Planning for Sustainable Communities*, ed. R. J. Burby (Washington, DC: Joseph Henry Press, 1998), 57–82.

<sup>2</sup> <https://ffrmp.nfrmp.us/>

<sup>3</sup> May and Deyle, “Governing Land Use in Hazardous Areas with a Patchwork System.”

<sup>4</sup> R. J. Burby et al., “Unleashing the Power of Planning to Create Disaster-Resistant Communities,” *Journal of the American Planning Association* 65 (1999): 247–58.

<sup>5</sup> R. J. Burby, *Cooperating with Nature: Confronting Natural Hazards with Land-Use Planning for Sustainable Communities* (Washington, DC: Joseph Henry Press, 1998).

<sup>6</sup> Alice Newton and Juergen Weichselgartner, “Hotspots of Coastal Vulnerability: A DPSIR Analysis to Find Societal Pathways and Responses,” *Estuarine, Coastal and Shelf Science* 140 (March 1, 2014): 123–33, <https://doi.org/10.1016/j.ecss.2013.10.010>.

<sup>7</sup> Mark T. Imperial and Derek Kauneckis, “Moving from Conflict to Collaboration: Watershed Governance in Lake Tahoe,” *Natural Resources Journal* 43, no. 4 (2003): 1011.

formal and informal structures.<sup>8</sup> The fluid process of governing a shared asset such as flood protection, means multiple decision makers and actors are involved in shaping policy.

In Louisiana, the state's Comprehensive Master Plan for a Sustainable Coast lays out priorities for state investments in reducing flood risk,<sup>9</sup> but much of the authority and land use decisions, which often include flood control, is held at the local level. Although the repetitive nature of flooding events allows local governments to learn from past mistakes,<sup>10</sup> regional cooperation with other local governments can improve protection.

Losses from flooding are increasingly costly. Since 1960, Brody, Highfield, and Kang estimate that annual losses from floods have fluctuated between \$16 and 86 billion across the United States and that the average cost is on a steep upward trajectory.<sup>11</sup> Floods are the most costly type of natural disaster, affecting every state.<sup>12</sup> Louisiana's high-value infrastructure along the coastline make losses from flooding and storm surge particularly costly. However, flood mitigation pays for itself.<sup>13</sup> A 2005 study of the Federal Emergency Management Agency grants program found that flood hazard mitigation returned \$4.10 for every \$1 invested.<sup>14</sup> Flood mitigation measures include both structural and non-structural options. Structural flood mitigation measures, such as levees, provide the opportunity to reduce risk from flooding. However, these structures must be properly engineered and maintained, a costly endeavor.

### Levee Districts

Levee district boards are formally tasked in state law with construction, maintenance, care, and inspection of levees and drainage. The laws governing these boards grant them a range of powers and duties, including the authority to construct bicycle and walking paths along levees, as well as buy, hold, sell, transfer, or exchange properties as needed to protect land from flood damage or provide adequate drainage around levees. Contiguous levee districts are also permitted to act jointly, and coordinate efforts.<sup>15</sup>

Levee districts remain important political and policy institutions across Louisiana, with many having served as the front-line for managing flood risk and response for well over a century. According to records maintained by the Association of Levee Boards of Louisiana, many of the state's levee districts were created by the state legislature over the course of the latter 19th

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<sup>8</sup> Laurence E. Lynn Jr., Carolyn J. Heinrich, and Carolyn J. Hill, "Studying Governance and Public Management: Challenges and Prospects," *Journal of Public Administration Research and Theory* 10, no. 2 (2000): 233–62, <https://doi.org/10.1093/oxfordjournals.jpart.a024269>.

<sup>9</sup> <http://coastal.la.gov/our-plan/2017-coastal-master-plan/>

<sup>10</sup> S. Brody et al., "Policy Learning for Flood Mitigation: A Longitudinal Assessment of the Community Rating System in Florida," *Risk Analysis* 29 (2009): 912–29.

<sup>11</sup> Samuel D. Brody, Wesley E. Highfield, and Jung Eun Kang, *Rising Waters* (Cambridge: Cambridge University Press, 2011).

<sup>12</sup> Brody, Highfield, and Kang.

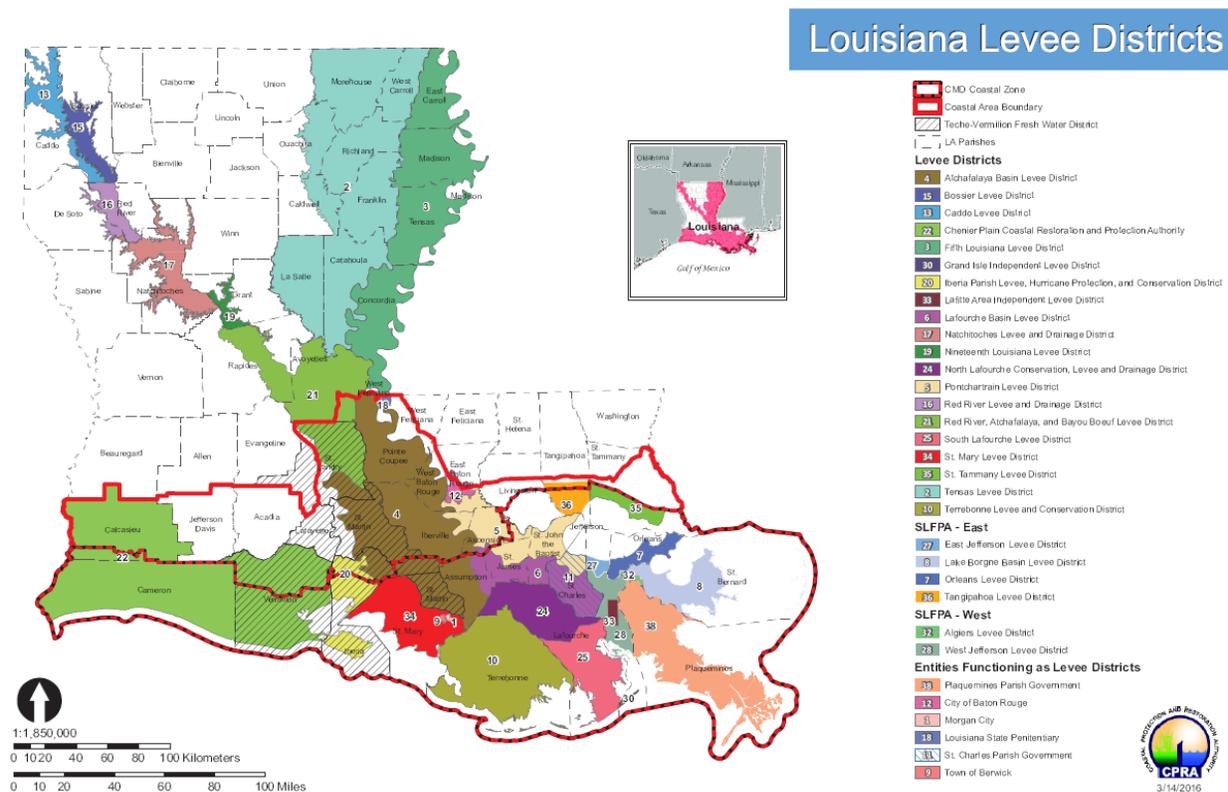
<sup>13</sup> David R. Godschalk et al., "Estimating the Value of Foresight: Aggregate Analysis of Natural Hazard Mitigation Benefits and Costs," *Journal of Environmental Planning and Management* 52, no. 6 (2009): 739–56, <https://doi.org/10.1080/09640560903083715>; Beverly A. Cigler, "U.S. Floods: The Necessity of Mitigation," *State and Local Government Review* 49, no. 2 (2017): 127–39, <https://doi.org/10.1177/0160323X17731890>.

<sup>14</sup> Multihazard Mitigation Council, "Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities" (Washington, DC: National Institute of Building Sciences, 2005).

<sup>15</sup> See La. R.S. 38:301, 38:301.1, 38:306, 38:325, 38:330, and 38:330.1, et seq.; Louisiana Constitution Article VI, Sections 38 through 42.

century and throughout the 20th century.<sup>16</sup> Levee districts have built and maintained levees, aligned to a parish boundary or along geographically-based jurisdictions, such as river basin districts. The latter may span multiple parishes or include only a portion of one parish. As environmental conditions and recognition of risks have evolved over time, so too has the map of Louisiana’s levee districts with a number of new districts created in recent years. After Hurricane Katrina, for example, two regional districts, one on either side of the Mississippi, were created to improve coordination in and around New Orleans. These recently-created regional entities are the Southeast Louisiana Flood Protection Authority-East (SLFPA-East) and Southeast Louisiana Flood Protection Authority-West (SLFPA-West) (see Figure 1). In general, these districts have financed their activities through their power to levy property taxes, though some rely on other sources of revenue, which are discussed below.<sup>17</sup>

**Figure 1: Louisiana Levee Districts**



Source: Coastal Protection and Restoration Agency

The role of local government in managing flood risk is not unique to Louisiana. The Netherlands, for example, has for centuries relied upon local “waterboards” (today, Regional Water Authorities) to raise revenues and coordinate resources in an effort to combat flooding.<sup>18</sup>

<sup>16</sup> Association of Levee Boards of Louisiana guidebook (accessed on March 9, 2020 at: <https://albl.org/wp-content/themes/alblredux/resources/documents/2012ALBLBOOK.pdf>)

<sup>17</sup> Ibid

<sup>18</sup> Combat Erosion By Law Coastal Defence Policy for the Netherlands, M. J. Kosterf and R. Hillen, 1995 (accessed at: [https://www.jstor.org/stable/4298425?seq=5#metadata\\_info\\_tab\\_contents](https://www.jstor.org/stable/4298425?seq=5#metadata_info_tab_contents))

Historically, these authorities have had the power to raise property taxes, making them similar to Louisiana’s Levee District Boards. More recently the Dutch national government has developed various programs (e.g., the Delta Fund) and ministries (e.g., Ministry of Infrastructure and Water Management) to centralize management and financing of flood prevention and protection efforts and to further mitigate risks and costs to coastal and low-lying communities.

### Authority of Levee Districts

State law equips Levee Boards with the powers to construct and manage lands around levees for flood protection purposes. Levee Boards also maintain levee and drainage maintenance and inspections. These boards have the power to construct infrastructure for public use along levees and the authority to dispose of and acquire properties to provide adequate drainage around levees.<sup>19</sup> Levee districts have limited taxing authority to raise revenues to cover these expenses.

Before 2006, levee districts did not have strict or uniform oversight of their authority to levy property taxes and maintain their levee systems. The lack of oversight led to a wide range of investments and acquisition of assets on behalf of levee districts that, while sometimes valuable in bolstering budgets, were not always viewed as an appropriate use of Levee Board authority.

Following Hurricane Katrina, levee districts created by the State Legislature before 2006 retained their prior limited constitutional authority to levy property taxes to pay for their missions, as well as to provide greater protection against flooding, hurricanes, and other purposes incidental to those primary goals. Those pre-2006 levee district boards retained their existing ability to approve limited property taxes without a vote of the residents in their district. Not all pre-2006 boards exercise the option to levy a millage. Other boards choose to levy a millage lower than the maximum allowed. For those boards interested in increasing the millage beyond the limited allowed property tax, the levee board must obtain a majority vote of affected residents in support of the higher millage (meaning that, at times, passage of a tax may require votes in multiple parishes, such as in SLFPAs).<sup>20</sup>

For levee districts formed after 2006, property taxes cannot be raised without approval by the voters in an election, or legislative action.<sup>21</sup> The authority to raise revenue wielded by levee boards governing post-2006 levee districts is more limited, both by the Constitution as well as by the will of voters.

### Flood Protection in the Greater New Orleans Area

The gradual evolution of Louisiana’s approach to flood protection accelerated following Hurricane Katrina in 2005. The failures of the levee system in and around New Orleans led the State of Louisiana to determine that regionalizing levee governance was necessary to better

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<sup>19</sup> RS 38 §301, 306, 313, 330, 402, 405, 513

<sup>20</sup> LA Constitution, Article VI, §39 - *Levee District Taxes*

<sup>21</sup> NOLA.com, “St. Tammany levee board could impose 5-mill tax without voter OK under pending bill,” April 12, 2017. Link: [https://www.nola.com/news/environment/article\\_9eeb3eb6-e1ad-5189-b924-5d7c408c0359.html](https://www.nola.com/news/environment/article_9eeb3eb6-e1ad-5189-b924-5d7c408c0359.html)

protect the region from flood risk.<sup>22</sup> Act 1 of the 2006 First Extraordinary Session of the Louisiana Legislature introduced a constitutional amendment governing the states' various levee districts and establishing two South Louisiana Flood Protection Authorities to oversee flood protection for the East and West Banks of the Mississippi River. The Amendment, which was adopted by popular vote, specified the powers, duties, jurisdiction, and members of these authorities while also establishing new professional requirements for individuals serving on their respective boards as commissioners.<sup>23</sup>

After Hurricane Katrina, the federal government also began investing more than \$14 billion to develop the Hurricane and Storm Damage Risk Reduction System (HSDRRS), (figure 2).<sup>24</sup> HSDRRS is an infrastructure system constructed by the U.S. Army Corps of Engineers and distributed across five parishes (Orleans, Jefferson, St. Bernard, St. Charles, and Plaquemines) and two sides of the Mississippi River. It includes levees, floodwalls, pumping stations, and other structures to reduce risks from floods and storm surge caused by severe weather and hurricanes. While substantial portions of the system are complete, some construction continues. Plans were recently announced to study the sustainability of protection offered by the current system under sea level rise scenarios and with potential future improvements.<sup>25</sup>

After construction, the long-term operations and maintenance of the system will fall to local governing authorities while the state is expected to repay the federal government for its portion of matching funds for the initial construction. The HSDRRS overlaps substantially, but not completely, with the boundaries of the South Louisiana Flood Protection Authorities. This creates some challenges for operation and maintenance of the system and has prompted the State of Louisiana to consider updating the governing statutes and constitutional provisions.

SLFPA-East governs the East Jefferson Levee District, Lake Borgne Basin Levee District, and the Orleans Levee District.<sup>26</sup> The authority oversees the following flood protection systems: the HSDRRS infrastructure, the Mississippi River and Tributaries (MR&T) Levee System, and the Interior Nonfederal Levee Systems.<sup>27</sup>

SLFPA-West governs the Algiers Levee District and West Jefferson Levee District and is responsible for roughly 47 miles of hurricane protection levees and roughly 33 miles of Mississippi River levees and floodwalls, as well as sharing responsibility for the Gulf Intercoastal Waterway West Closure Complex (WCC), the world's largest pumping station and one of the largest sea walls in North America.<sup>28</sup>

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<sup>22</sup> <https://www.floodauthority.org/about-us/who-we-are/>

<sup>23</sup> [www.legis.la.gov/Legis/ViewDocument.aspx?d=363753](http://www.legis.la.gov/Legis/ViewDocument.aspx?d=363753)

<sup>24</sup> Greater New Orleans Hurricane and Storm Damage Risk Reduction System Facts and Figures, Jan 2018.

<sup>25</sup> See <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/studies/LPV-GRR/> and <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/studies/WBV-GRR/>

<sup>26</sup> See [www.legis.la.gov/Legis/Law.aspx?d=366193](http://www.legis.la.gov/Legis/Law.aspx?d=366193). SLFPA-East technically includes Tangipahoa Parish, but it is considered inactive according to Authority staff. The Parish collects no revenue and spends no money as part of the regional authority.

<sup>27</sup> <https://www.floodauthority.org/about-us/who-we-are/>

<sup>28</sup> [www.legis.la.gov/Legis/Law.aspx?d=366193](http://www.legis.la.gov/Legis/Law.aspx?d=366193); <https://slfpaw.org/>

Together, SLFPA-East and SLFPA-West are among the most critical entities protecting Louisianans in the New Orleans metro area and the surrounding region from flooding and other natural disasters.

**Figure 2:** Map of Greater New Orleans Hurricane and Storm Damage Risk Reduction System



Source: U.S. Army Corps of Engineers

While sharing similar missions and powers, the two flood protection authorities have somewhat different governing structures from one another, as well as in comparison to a typical levee district. SLFPA-East is composed of nine governor-appointed board members, while SLFPA-West has a seven-member board.

Of its nine members, SLFPA-East is required to have at least, and no more than, one member representing each parish – Jefferson, Orleans, and St. Bernard – on its the board.<sup>29</sup> Five board members must be either engineers or professionals in a related field, with at least one of those five being a civil engineer.<sup>30</sup> Two of the remaining four members must be professionals with ten years of experience in a field other than engineering, and the final two members must be at-large.<sup>31</sup>

<sup>29</sup> [www.legis.la.gov/Legis/Law.aspx?d=366193](http://www.legis.la.gov/Legis/Law.aspx?d=366193)

<sup>30</sup> [www.legis.la.gov/Legis/Law.aspx?d=366193](http://www.legis.la.gov/Legis/Law.aspx?d=366193)

<sup>31</sup> [www.legis.la.gov/Legis/Law.aspx?d=366193](http://www.legis.la.gov/Legis/Law.aspx?d=366193)

For SLFPA-West, four of the seven board members must represent Jefferson and Orleans parishes, with two from the West Bank of each parish. The remaining three board members must be residents from outside Jefferson and Orleans parishes.<sup>32</sup> Similarly to the East Authority, three board members must be engineers or professionals in a related field, and one of those three members must be a civil engineer.<sup>33</sup> Another three board members must come from a different profession with ten years of experience and a baccalaureate degree. The final and seventh member is required to meet either of those previous requirements (meaning they may be an engineer, a professional from a related field, or a professional from another field with a baccalaureate degree).<sup>34</sup>

Board members for each authority are recommended for their positions by a nominating committee, which refers board candidates to the governor for nomination, followed by confirmation in the Louisiana State Senate. SLFPA Board members serve four-year terms, and though they may be reappointed, cannot serve consecutive terms.

The nominating committee for both boards is composed of members or designees of the Public Affairs Research Council of Louisiana; the Council for a Better Louisiana; the Louisiana Geological Survey at Louisiana State University (LSU); the Association of State Floodplain managers; the National Society of Black Engineers; the engineering departments of the University of New Orleans, Tulane University, Southern University, and LSU; the American Society of Civil Engineers; and the Louisiana Engineering Society. These committee members are appointed for eight-year terms.

The use of a nominating committee to make recommendations for the board combined with the rules that govern the makeup of the board have been successful in bringing expertise to the regional authorities. However, even with the current process local representation has continued to be a concern, especially for SLFPA-East where the law prescribes that only three of the nine board members are to be residents of the local area. Perhaps even more important is the need to ensure a greater diversity of representation, especially with the most vulnerable segments of the population likely to be even more reliant on strong regional governance to reduce flood risk. While explicit targets for diversity based on race, gender or ethnicity might be challenging to add on top of an already complex set of criteria for the nominating committee to follow, there should be an explicit objective to ensure the board reflects the diversity of the local population.

While the SLFPAs are now regionalized and consolidated in terms of governance, administration, and as of 2017 their staff, their financing remains divided by historical levee district (or parish) lines. State law requires that proceeds from a tax levied or revenue received by an authority or levee district may only be spent on whichever jurisdiction that tax or revenue came from.<sup>35</sup> The only exception is when funds serve a shared purpose. For example, according to staff at SLFPA-East, funds used to serve a shared purpose – such as paying staff and funding

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<sup>32</sup> [www.legis.la.gov/Legis/Law.aspx?d=366193](http://www.legis.la.gov/Legis/Law.aspx?d=366193)

<sup>33</sup> [www.legis.la.gov/Legis/Law.aspx?d=366193](http://www.legis.la.gov/Legis/Law.aspx?d=366193)

<sup>34</sup> [www.legis.la.gov/Legis/Law.aspx?d=366193](http://www.legis.la.gov/Legis/Law.aspx?d=366193)

<sup>35</sup> R.S.38§330.3(B)

authority-wide projects – typically utilize a ratio based on each levee district’s contribution to the SLFPA as a whole (e.g., 60% from Orleans, 30% from East Jefferson, and 10% from Lake Borgne). Restrictions on revenue-sharing challenge a regional approach to flood protection by reducing opportunities to support larger-scale projects that might make the region more secure but may have a limited direct impact on all taxpayers. In such cases the broader benefits to the region from a specific project must be clear to generate a consensus that investments in one jurisdiction fulfill a shared purpose for all jurisdictions

### Other Entities Functioning as Levee Districts

The SLFPAs are not the only unique arrangement for levee management beyond traditional levee districts—Plaquemines Parish Government, City of Baton Rouge, Morgan City, Louisiana State Penitentiary, St. Charles Parish Government, and the Town of Berwick are not formally established as levee districts, but take on responsibility for flood protection within their jurisdictions. Each of these political subdivisions are listed as “other entities functioning as levee districts” under the state’s Coastal Protection and Restoration Authority list of levee districts. As a result, while most levee districts are financed using dedicated property taxes, these parish, city, and other government institutions use a wider range of revenues to fund their levees that distinguish them from other levee districts.

One such area that is not part of either SLFPA but does include some areas within the HSDRRS is Plaquemines Parish.<sup>36</sup> Unlike most levee districts, Plaquemine Parish Government does not use property taxes to fund its levee districts, nor does it have a separate levee board to govern them. Instead, the Plaquemines Parish Council serves as both the levee board and Parish-wide governing authority, and utilizes funds from its general fund, including oil and gas royalties, parish property tax, and sales tax. The parish government uses these funds to maintain levees and provide flood protection within the parish in the same way that they would maintain and support other publicly-owned property.<sup>37</sup>

Another area with a unique governance structure is St. Charles Parish, which is both an equivalent to a levee district and part of two other levee districts: Lafourche Basin Levee District (for the West Bank) and Pontchartrain Levee District (for the East Bank). As a result, portions of St. Charles contribute property taxes into three different levee authorities: Lafourche Basin, Pontchartrain, and St. Charles Parish. The parish coordinates maintenance of levees using these tax revenues with whichever levee district shares jurisdiction over the levee structure in question. For example, the East Bank levees built by the federal government as part of HSDRRS are maintained by the Pontchartrain Levee District.<sup>38</sup>

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<sup>36</sup> Plaquemines Parish has three separate levee districts within the parish that are consolidated for governance under the Plaquemines Parish Council, acting as a levee board in accord with Louisiana Constitution Article VI, Section 38(A)(2).

<sup>37</sup> Plaquemine Parish Government 2020 Budget, link: [https://plaqueminesparish.com/wp/wp-content/uploads/2020/01/2020\\_Original\\_Budget\\_secured.pdf](https://plaqueminesparish.com/wp/wp-content/uploads/2020/01/2020_Original_Budget_secured.pdf)

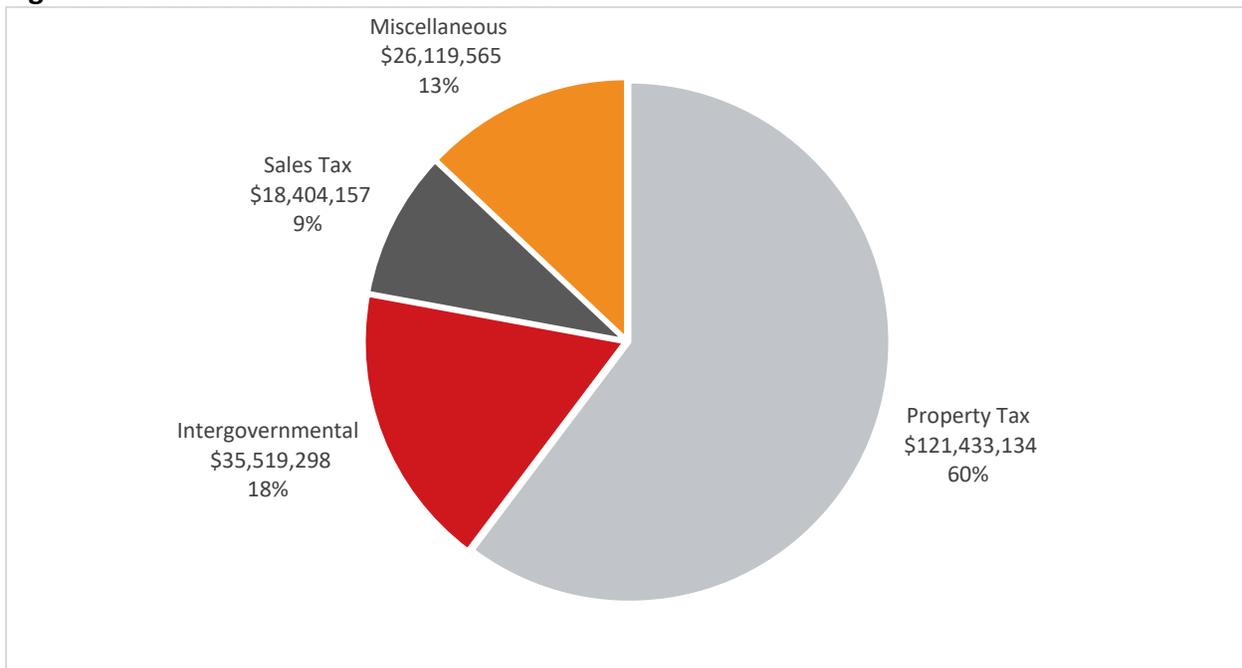
<sup>38</sup> St. Charles Parish Government, East Bank Levees. Link: <https://www.stcharlesparish-la.gov/departments/public-works-and-wastewater/levee-updates/east-bank-levees>



## Major Sources of Revenue

Annual revenues of local levee districts totaled roughly \$201m in recent years. Figure 4 illustrates major sources of revenues based on the most recently available information from each levee district. Table 1 provides a summary of revenue sources for each district. Property taxes provide the largest source of revenue and has a natural nexus to the flood protection benefits of levees. Intergovernmental transfers provide the second largest source of revenues. These transfers include a combination of federal and state dollars obtained to support local projects and revenues from broad-based taxes transferred from a parish or city government to support flood protection projects. Local governments use sales taxes as the dominant source of funding in Louisiana. While only a few levee districts have established a dedicated sales tax, this source generates a substantial amount of revenue, accounting for approximately 10% of all revenues across levee districts. Although smaller in size, a range of other revenue sources supplement the major sources of revenue. These other sources include capital grants, royalties and leases, and other miscellaneous sources.

**Figure 4:** Levee District Sources of Revenue



Source: Levee district budget documents and authors' calculations. Miscellaneous category includes fees, royalties, service charges, interest, sale of assets, and other. Calculations do not include a one-time \$748m U.S. Army Corps of Engineers intergovernmental transfer to the Orleans Levee District

Property taxes are the most widely used approach among levee districts and provide the majority of revenues for nearly all districts. Some levee districts rely heavily on other sources of revenue including sales taxes, natural resource revenues, and funds generated from land or property transactions.

Only three levee districts have a dedicated sales tax as part of their revenue mix. These districts include North Lafourche, South Lafourche, and Terrebonne. In each case, sales taxes generate a

sizable amount of revenue with sales taxes making up 27% of total revenues in North Lafourche, 34% of total revenues in South Lafourche, and 24% in Terrebonne. Levee districts without dedicated revenue streams, such as Caddo, Iberia, and St. Tammany rely heavily on interagency transfers and other sources to address local needs. St. Tammany Parish had revenues of \$7,599 in FY 2018 from an interagency transfer. In 2019, Caddo Parish reported \$1,118,232 from state-granted land rentals and royalty revenue. In 2016, Iberia Parish Levee, Hurricane, and Conservation District reported \$389,405 from an intergovernmental transfer for use on public works.

**Table 1: Major Source of Revenue for Levee Districts**

Region	Levee District	Revenue					Total Revenue
		Year	Property Tax	Sales Tax	Intergov.	Misc.	
SLFPA- EAST <sup>a</sup>	Southeast Louisiana Flood Protection Authority-East	2018	\$ -	\$ -	\$ -	\$ 303,675	\$ 303,675
	East Jefferson Levee District	2018	\$ 9,901,365	\$ -	\$ 444,569	\$ 492,667	\$ 10,838,601
	Lake Borgne Basin Levee District	2018	\$ 3,522,278	\$ -	\$ 808,408	\$ 48,880	\$ 4,379,566
	Orleans Levee District <sup>b</sup>	2018	\$ 42,563,791	\$ -	\$ 1,096,103	\$ 2,384,066	\$ 793,949,630
SLFPA- WEST <sup>a</sup>	Southeast Louisiana Flood Protection Authority-West	2018	\$ -	\$ -	\$ 349,725		\$ 349,725
	Algiers Levee District	2018	\$ 2,627,855	\$ -	\$ 94,773	\$ 67,000	\$ 2,789,628
	West Jefferson Levee District	2018	\$ 5,066,516	\$ -	\$ 381,972	\$ 351,580	\$ 5,800,068
Other HSDRRS	Plaquemines Parish <sup>c</sup>	2018	\$ -	\$ -	\$ -	\$ 807	\$ 807
	St. Charles Parish	2019	\$ 5,064,478	\$ -	\$ -	\$ -	\$ 5,064,478
Other Levee Districts	Atchafalaya Basin Levee District	2019	\$ 7,067,681	\$ -	\$ 242,234	\$ 1,102,162	\$ 8,412,077
	Bossier Levee District	2018	\$ 2,771,475	\$ -	\$ 200,245	\$ 296,882	\$ 3,268,602
	Caddo Levee District	2019	\$ -	\$ -	\$ -	\$ 1,793,667	\$ 1,793,667
	Cheniere Plain Coastal Rest. & Protection Authority	N/A	\$ -	\$ -	\$ -	\$ -	\$ -
	Fifth Louisiana District	2019	\$ 1,298,081	\$ -	\$ 42,127	\$ 1,427,900	\$ 2,768,108
	Grand Isle Independent Levee District	2019	\$ 224,164	\$ -	\$ 714,370	\$ 25,013	\$ 963,547
	Iberia Parish Levee, Hurricane, & Conservation District	2016	\$ -	\$ -	\$ 389,405	\$ -	\$ 389,405
	Lafitte Area Independent Levee District	2019	\$ 243,550	\$ -	\$ -	\$ 7,921,324	\$ 8,164,874
	Lafourche Basin Levee District	2019	\$ 4,786,672	\$ -	\$ 72,642	\$ 802,995	\$ 5,662,309
	Natchitoches Levee and Drainage District	2019	\$ 860,117	\$ -	\$ 39,120	\$ 9,599	\$ 908,836
	Nineteenth Louisiana Levee District	2019	\$ 73,161	\$ -	\$ -	\$ -	\$ 73,161
	North Bossier Levee & Drainage District	N/A	\$ -	\$ -	\$ -	\$ -	\$ -
	North Lafourche Conservation, Levee & Drainage District	2018	\$ 4,157,345	\$ 2,487,619		\$ 2,653,260	\$ 9,298,224
	Pontchartrain Levee District	2019	\$ 11,275,285	\$ -	\$ 399,153	\$ 1,069,685	\$ 12,744,123
	Red River, Atchafalaya, & Bayou Boeuf Levee District	2019	\$ 2,727,464	\$ -	\$ 83,174	\$ 197,463	\$ 3,008,101
	Red River Levee & Drain. District	2019	\$ 633,914	\$ -			\$ 633,914
	South Lafourche Levee District <sup>d</sup>	2019	\$ 5,456,609	\$ 5,042,387	\$ 1,225,951	\$ 3,162,004	\$ 14,886,951
	Squirrel Run Levee District	N/A	\$ -	\$ -	\$ -	\$ -	\$ -
	St. Mary Levee District	2018	\$ 2,902,829	\$ -	\$ 277,312	\$ 62,882	\$ 3,243,023
	St. Tammany Levee, Drainage, & Conservation District	2018	\$ -	\$ -	\$ 7,599	\$ -	\$ 7,599
Tangipahoa Levee District	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	
Tensas Basin Levee District	2019	\$ 3,572,471	\$ -	\$ 85,664	\$ 1,566,013	\$ 5,224,148	
Terrebonne Levee and Conservation District	2019	\$ 4,636,033	\$ 10,874,151	\$ 28,564,752	\$ 380,041	\$ 44,454,977	

<sup>a</sup> Property taxes within each SLFPA are shown only for the levee districts within the region to avoid duplication. Transfers from individual levee districts to the SLFPA or cost sharing allocations are not shown to avoid duplication.

<sup>b</sup> Does not include one-time U.S. Army Corps of Engineers transfer of \$747.9 million for capital projects.

<sup>c</sup> Plaquemines does not currently dedicate taxes to levees. Parishwide revenues are not included in the table to avoid overstating resources available for levees.

<sup>d</sup> Budget document reports only a total for tax collections. Property tax, sales tax and revenue sharing provided directly by South Lafourche Levee District.

### Special Case: Plaquemines Parish Levees

Plaquemines Parish functions as the levee district for the three historic levee districts established within the parish, Buras, Grand Prairie, and West Bank Levee. Similar to other levee districts, there are no dedicated revenue streams established for levee building, operations or maintenance.<sup>40</sup> Instead, Plaquemines Parish manages levee-related responsibilities as part of parish-wide government. It makes annual allocation decisions to levee-related expenses within the context of other government functions. The parish relies on a mix of property tax, sales tax, oil and gas revenue, and a range of other smaller income sources to support its local government activities. Through the use of bonds, the parish can extend the scope of their capital projects and smooth out royalty funding streams. Based on their 5-year capital improvement budget, Plaquemines Parish Government intended to spend over \$14.6m on levee improvements and over \$12.9m on flood control and drainage capital projects.<sup>41</sup> Although the funding is spent in chunks on individual projects, the average spending is about \$5.5m annually. The Plaquemines Parish budget documents list its levee districts as Buras, Grand Prairie, and West Bank Levee. These districts are projected to generate \$4,920,950 in oil and gas royalties in 2020.<sup>42</sup>

The oil and gas royalty revenues for the Plaquemines Parish General Fund are based on the price of oil per barrel and the price of gas per Mcf. Actual revenues in 2018 included \$6,287,231 from oil and \$297,981 from gas for a combined total of \$6,585,212 from parish royalties. A combined \$6,585,212 from total parish royalties with \$7,741,887 from state 10% royalties equates to a total of \$14,327,099.<sup>43</sup> This compares to \$12,957,196 in parish-wide sales tax and \$14,584,489 in parish-wide property taxes, out of a total of \$92,838,888 in revenues (table 2).<sup>44</sup>

**Table 2: Severance Tax Revenues from Plaquemines Parish Levee Districts**

<b>Plaquemines Parish</b>	<b>2018 Actual</b>
Parish Royalties	
Oil	\$6,287,231
Gas	\$297,981
State 10% Royalties	\$7,741,887
<b>TOTAL</b>	<b>\$14,327,098</b>

### Revenue Spotlight: Gulf of Mexico Energy Security Act (GOMESA)

Since Fiscal Year 2007, the federal government has shared a portion of revenues from offshore oil and gas leases in the Gulf of Mexico with four states – Texas, Louisiana, Mississippi, and

<sup>40</sup> As of the date of this report, the Plaquemines Parish Council, acting as the levee board for the three Plaquemines Parish levee districts, has never imposed any millage under the authority granted for taxing up to 5 mills without a vote of the public.

<sup>41</sup> Plaquemine Parish Government 2020 Budget, link: [https://plaqueminesparish.com/wp/wp-content/uploads/2020/01/2020\\_Original\\_Budget\\_secured.pdf](https://plaqueminesparish.com/wp/wp-content/uploads/2020/01/2020_Original_Budget_secured.pdf)

<sup>42</sup> Page 197, Plaquemine Parish Government 2020 Budget

<sup>43</sup> Page 196 of 891, Plaquemine’s Parish Government 2020 Budget

<sup>44</sup> Page 23 of Plaquemines Parish Government primary financial statements of and for 2018 (link: [https://plaqueminesparish.com/wp/wp-content/uploads/2019/07/2018AuditReport\\_Secured\\_w\\_bkmks.pdf](https://plaqueminesparish.com/wp/wp-content/uploads/2019/07/2018AuditReport_Secured_w_bkmks.pdf))

Alabama. In Fiscal Year 2017, the share of qualified revenues that could be shared expanded dramatically, providing substantial funding that could be used for coastal restoration and flood prevention projects. There are a number of other eligible uses of funds that include “projects and activities for the purposes of coastal protection, including conservation, coastal restoration, hurricane protection, and infrastructure directly affected by coastal wetland losses.”<sup>45</sup> While parishes will have local priorities that align with many of these eligible uses, coordination between levee districts and coastal parishes to fund hurricane protection projects could help leverage a sizable additional revenue stream in future years. In 2019, Louisiana received \$94.7 million in shared offshore oil revenues, as formulated under GOMESA. This included \$75.8 million to the state and \$18.9 million across the state’s 19 coastal parishes (Table 3).

**Table 3:** Parish GOMESA Disbursements

Parish	GOMESA Disbursement (2019)
Assumption Parish	\$ 624,302
Calcasieu Parish	\$ 1,006,346
Cameron Parish	\$ 1,294,394
Iberia Parish	\$ 993,922
Jefferson Parish	\$ 1,571,308
Lafourche Parish	\$ 980,198
Livingston Parish	\$ 783,550
Orleans Parish	\$ 1,299,392
Plaquemines Parish	\$ 1,856,691
St. Bernard Parish	\$ 892,387
St. Charles Parish	\$ 666,344
St. James Parish	\$ 582,116
St. John the Baptist Parish	\$ 629,068
St. Martin Parish	\$ 704,744
St. Mary Parish	\$ 833,307
St. Tammany Parish	\$ 1,030,784
Tangipahoa Parish	\$ 752,644
Terrebonne Parish	\$ 1,450,356
Vermilion Parish	\$ 993,785

Source: Department of Interior

### Review of Property Taxes

Property taxes provide a natural nexus to flood protection because the very assets that levees seek to protect can be used to support needed investments in proportion to the value of those assets. Because of the important role property taxes play in supporting levee district operations, a more detailed review of property taxes is provided, including an overview of the underlying constitutional and statutory authority to levy a property tax, a detailed review of current tax rates, and an assessment of revenues that could be generated by expanding the core constitutional authority to levy property taxes in all districts.

<sup>45</sup> Section 105(d)(1)(A) of GOMESA

### Louisiana Property Tax Laws

Louisiana property tax policies are largely enshrined within the Louisiana State Constitution and serve as a significant source of revenue to Louisiana's parishes, municipalities, and various other political subdivisions, including most levee districts. The Constitution gives authority to political subdivisions to impose property taxes up to a base amount of 5 mills without voter approval. A mill is a term used in the context of property taxes and represents one thousandth of a dollar (equivalent to one tenth of one cent). Property taxes are expressed as millage rates, which represent the number of dollars of tax assessed for each \$1,000 of assessed property value. The Constitution requires that local voters approve increases in property taxes above the constitutionally allowed base levels. Millage rates are applied to the assessed value of property, which is calculated as a percentage of the fair market value for residential (10%), commercial (15%), and public service (25%) properties. For agriculture, horticultural, marsh and timber lands, value is assessed on 15% of use value. Millage increases adopted by voters generate additional property tax revenues that are often dedicated to some public service or improvement, such as financing a levee district. <sup>46</sup>

### Current Property Tax Millage Rates

Table 4 shows the current millage rate applicable to the 2020 tax year and the most recent revenues reported by each district. Levee districts can contain multiple parishes, or portions of parishes. A comprehensive listing of the parishes with land in each levee district is provided in Appendix A. Millage rates are denoted as authorized by constitutional, voter approved, or legislative (statutory) authority. Only Terrebonne Levee District has a millage established by legislative authority. While most districts can levy a maximum of 5 mills under their constitutional authority, it is noteworthy that several districts have a constitutional millage rate above 5 mills. This can occur due to property reassessments whereby the value of property declines in an area and the millage is adjusted upwards to maintain the same level of tax revenues. Several districts have no property taxes dedicated to levees, including Caddo Levee District; Chenier Plain Coastal Restoration and Protection Authority; Iberia Parish Levee, Hurricane, and Conservation District; North Bossier Levee and Drainage District; Squirrel Run Levee District; St. Tammany Levee, Drainage, and Conservation District; and Tangipahoa Levee District.

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<sup>46</sup> Louisiana Property Tax Basics, Louisiana State House of Representatives ([accessed February 28, 2020](#))

**Table 4: Dedicated Property Taxes for Levee Districts**

Region	Levee District	Constitutional Millage Rate	Voter Approved Millage Rate	Leg. or Statutory Millage	Total Millage Rate (2020)	Year of Revenues	Prior Actual Revenues
SLFPA-EAST	East Jefferson Levee District		4.01		4.01	2018	\$9,901,365
	Lake Borgne Basin Levee	3.91	7.42		11.33	2018	\$3,522,278
	Orleans Levee District	5.46	6.82		12.28	2018	\$ 42,563,791
SLFPA-WEST	Algiers Levee District	5.46	7.1		12.56	2018	\$ 2,627,855
	West Jefferson Levee District	5.03	4.75		9.78	2018	\$ 5,066,516
Other HSDRRS	Plaquemines Parish <sup>a</sup>				0		\$ -
	St. Charles Parish	4.07			4.07	2019	\$ 5,064,478
Other Levee Districts	Atchafalaya Basin Levee District	4.04			4.04	2019	\$7,067,681
	Bossier Levee District	4.3			4.3	2018	\$2,771,475
	Caddo Levee District				0		\$ -
	Cheniere Plain Coastal Rest. & Protection Authority				0		\$ -
	Fifth Louisiana District	3.86			3.86	2019	\$1,298,081
	Grand Isle Independent Levee	4.66			5.12	2019	\$224,164
	Iberia Parish Levee, Hurricane & Conservation District				0		\$ -
	Lafitte Area Independent	5.54			5.54	2019	\$243,550
	Lafourche Basin Levee District <sup>b</sup>	3.88			3.88	2019	\$4,786,672
	Natchitoches Levee and	4.22			4.22	2019	\$860,117
	Nineteenth Louisiana Levee	6.16			6.16	2019	\$73,161
	North Bossier Levee and				0		\$ -
	N. Lafourche Conservation, Levee & Drainage District <sup>b,c</sup>	5	6		11	2018	\$ 4,157,345
	Potchartrain Levee District	3.53			3.53	2019	\$11,275,285
	Red River, Atchafalaya, & Bayou Boeuf Levee District	3.71			3.71	2019	\$2,727,464
	Red River Levee and Drainage	4.55			4.55	2019	\$ 633,914
	South Lafourche Levee District	4.86	5		9.86	2019	\$5,456,609
	Squirrel Run Levee District				0		\$ -
	St. Mary Levee District <sup>b</sup>			5	5	2018	\$2,902,829
	St. Tammany Levee, Drainage, & Conserv. District				0		\$ -
Tangipahoa Levee District				0		\$ -	
Tensas Basin Levee District	3			3	2019	\$3,572,471	
Terrebonne Levee and Conservation District				4.89	4.89	2019	\$4,636,033

<sup>a</sup> While the parish collects property taxes, no millage is dedicated to the levee district

<sup>b</sup> Revenue is reported by calendar year

<sup>c</sup> North Lafourche Conservation, Levee and Drainage District passed the voter-approved 6 mills in 2017 to be collected starting in 2019, but 2019 revenues not yet available so revenue is based only on the constitutional 5 mills.

Note: Other entities functioning as levee districts outside of the HSDRRS area not included because those entities have no property taxes dedicated to levees.

### Property Tax Revenue from Extending Constitutional 5 Mills

Levee districts historically benefited from constitutional authority to levy up to 5 mills without requiring a public vote. This option provided a minimal base of funding to support flood protection in areas where the legislature had created a levee district to address a recognized need for ongoing flood protection investments. However, districts created more recently do not have that same authority while other districts have chosen not to levy the full 5 mills. Several recently-created districts have struggled to establish a recurring source of revenues due to a lack of voter support. In others minimal initial funding was inadequate to build voter support, despite a recognition by the legislature that a local levee district was needed.

One solution is to extend the same authority to all levee districts to impose up to a 5 mill property tax should the district determine the revenues are needed to provide for the jurisdictions flood protection. This statutory and constitutional change would be sought to ensure levee districts had adequate funding and this should be done carefully so as not to disrupt or undermine other sources of revenue that have been established through voting or legislative action. As such, Table 5 shows the estimated property tax revenues for each levee district focusing only on the constitutional millage rate and assumes that other revenues would be maintained. In other words, Table 5 focuses on only a portion of the property tax revenues that were presented in Tables 1 and 3 in order to illustrate the increase in potential revenues that could be expected if the constitutional authority were reset to allow all levee districts to levy 5 mills with the exception of entities currently levying more than 5 constitutional mills due to reassessment. These entities would be authorized to maintain their current millage rates. The revenue figures in the final column represent potential increases in revenue for levee districts given that the reestablished 5 mill taxing authority. This ability would be a ceiling since not all districts would choose to levy the full amount.

Revenue estimates were not produced for North Bossier Levee and Drainage District or Squirrel Run Levee District because these recently created districts have no prior taxing history. Assessed value for property in the portion of the parish within each levee district was not available and could not be estimated due to a lack of public mapping data for these districts.

**Table 5: Impact of Changes to Constitutional 5 Mills**

Region	Levee District	Revenues from Existing Constitutional Millage	Potential Revenues from 5 Mills <sup>b</sup>	Potential Revenue Increase <sup>b</sup>
<b>SLFPA-EAST</b>	East Jefferson Levee District	\$ -	\$ 12,346,000	\$ 12,346,000
	Lake Borgne Basin Levee District	\$ 1,215,543	\$ 1,554,000	\$ -
	Orleans Levee District	\$ 18,924,943	\$ 17,331,000	\$ -
<b>SLFPA-WEST</b>	Algiers Levee District	\$ 1,142,364	\$ 1,046,000	\$ -
	West Jefferson Levee District	\$ 2,605,785	\$ 2,590,000	\$ -
<b>Other HSDRRS</b>	Plaquemines Parish	\$ -	\$ 5,061,000	\$ 5,061,000
	St. Charles Parish	\$ 5,064,478	\$ 6,222,000	\$ 1,157,000
<b>Other Levee Districts<sup>a</sup></b>	Atchafalaya Basin Levee District	\$ 7,067,681	\$ 8,747,000	\$ 1,679,000
	Bossier Levee District	\$ 2,771,475	\$ 3,223,000	\$ 451,000
	Caddo Levee District	\$ -	\$ 2,011,000	\$ 2,011,000
	Cheniere Plain Coastal Restoration and Protection Authority	\$ -	\$ 13,554,000	\$ 13,554,000
	Fifth Louisiana District	\$ 1,298,081	\$ 1,681,000	\$ 383,000
	Grand Isle Independent Levee District	\$ 204,024	\$ 219,000	\$ -
	Iberia Parish Levee, Hurricane, and Conservation District	\$ -	\$ 3,838,000	\$ 3,838,000
	Lafitte Area Independent Levee District	\$ 243,550	\$ 220,000	\$ -
	Lafourche Basin Levee District	\$ 4,786,672	\$ 6,168,000	\$ 1,382,000
	Natchitoches Levee and Drainage District	\$ 860,117	\$ 1,019,000	\$ 159,000
	Nineteenth Louisiana Levee District	\$ 73,161	\$ 59,000	\$ -
	North Lafourche Conservation, Levee and Drainage District	\$ 4,157,345	\$ 4,157,000	\$ -
	Potchartrain Levee District	\$ 11,275,285	\$ 15,971,000	\$ 4,695,000
	Red River, Atchafalaya, and Bayou Boeuf Levee District	\$ 2,727,464	\$ 3,676,000	\$ 948,000
	Red River Levee and Drainage District	\$ 633,914	\$ 697,000	\$ 63,000
	South Lafourche Levee District	\$ 2,689,566	\$ 2,767,000	\$ -
	St. Mary Levee District	\$ -	\$ 2,903,000	\$ 2,903,000
	St. Tammany Levee, Drainage, and Conservation District	\$ -	\$ 5,428,000	\$ 5,428,000
	Tangipahoa Levee District	\$ -	\$ 191,000	\$ 191,000
	Tensas Basin Levee District	\$ 3,572,471	\$ 5,954,000	\$ 2,382,000
Terrebonne Levee and Conservation District	\$ -	\$ 4,740,000	\$ 4,740,000	

<sup>a</sup>Data on North Bossier Levee and Drainage District and Squirrel Run Levee District were not available. These two districts were excluded from the analysis.

<sup>b</sup> Rounded to nearest \$1,000.

## Analysis of Expenditures

Expenditures required by levee districts can vary considerably over time with larger one-time infrastructure projects often benefiting from state or federal cost-sharing, or the use of revenue bonds to harness a portion of future local dollars. However, local levee districts are typically responsible for the ongoing operations and maintenance of flood protection systems and those expenditures will make up the bulk of annual operating budgets. Following the large-scale investments made to implement the HSDRRS system after Hurricane Katrina, long-run budgetary needs to operate and maintain the system remain uncertain. This has led to a gradually-evolving system of regional coordination across levee districts but remains a topic of concern given the importance of the HSDRRS to flood protection and community and economic vitality in this part of the state. As such, we focus on analyzing budgets and the outlook for operations and maintenance needs in this part of the state to highlight potential areas of concern and opportunities to bolster the region's ability to finance long-term operations and maintenance of the system.

## Review of SLFPA Budgets

Using the Proposed Budget Report for SLFPA-East and West, we were able to analyze the different categories and subcategories of their expenditures. For SLFPA-West, these reports included all revenues and expenditures for the authority including West Jefferson and Algiers Levee Districts. On the other hand, SLFPA-East's budget reports are separated into four parts: authority expenditures and revenues and those for Orleans, East Jefferson, and Lake Borgne levee districts.

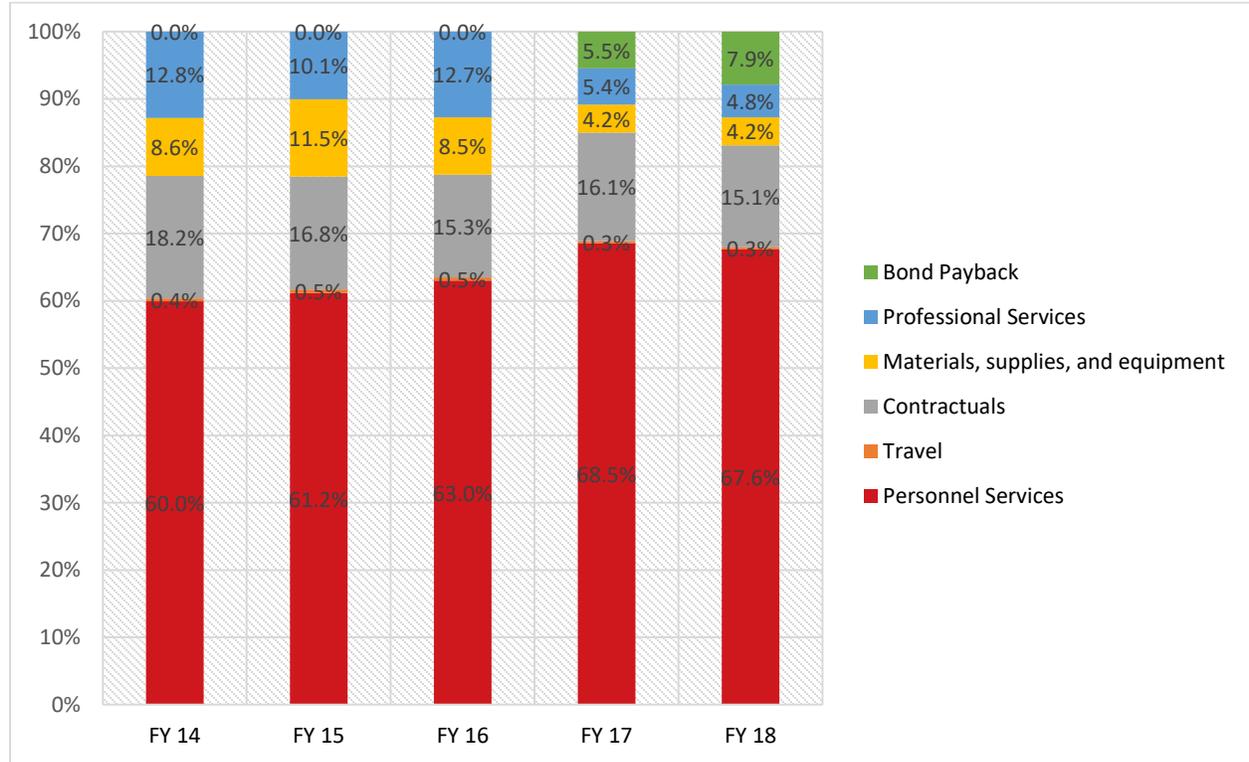
Figure 5 shows SLFPA-West's expenditure breakdown by percentage for fiscal years 2014 through 2018. The budget documents include an "Other" subcategory that contains spending on the West Closure Complex as well as an unrelated bond payback. A cross-jurisdictional piece of infrastructure, the WCC is supported through unique financial commitments that go beyond SLFPA-West. Given this distinct status the WCC expenditures are excluded in Figure 5. The bond payback included \$334,937 and \$817,678 in fiscal years 2017 and 2018 respectively. Other categories, such as office expense, equipment rentals and repairs, and fuel purchases, were reorganized and consolidated into the broader categories of contractuels, materials supplies and equipment, and professional services to better align the two SLFPA budget documents.

Figure 6 presents SLFPA-East's expenditure breakdown by percentage for fiscal years 2014 through 2018. The original SLFPA-East budget documents included the subcategory of Total Cost Allocations, which were \$989,248, \$808,194, and \$1,521,938 in fiscal years 2016, 2017, and 2018 respectively. These were removed from the summary to avoid counting interagency transfers that do not reflect actual final expenditures.

After aligning the detailed categories of expenditure with broader categories shared by the SLFPA-West documents, expenditures were found to be proportionately very similar between the two authorities. Personnel services make up the largest share of expenditures, including salaries and overtime, employee benefits, and the commissioner per diems. Contractuels include building maintenance and repairs, general liability insurance, flood protection materials and supplies, equipment repairs, equipment rental utilities, and data subscriptions. Materials

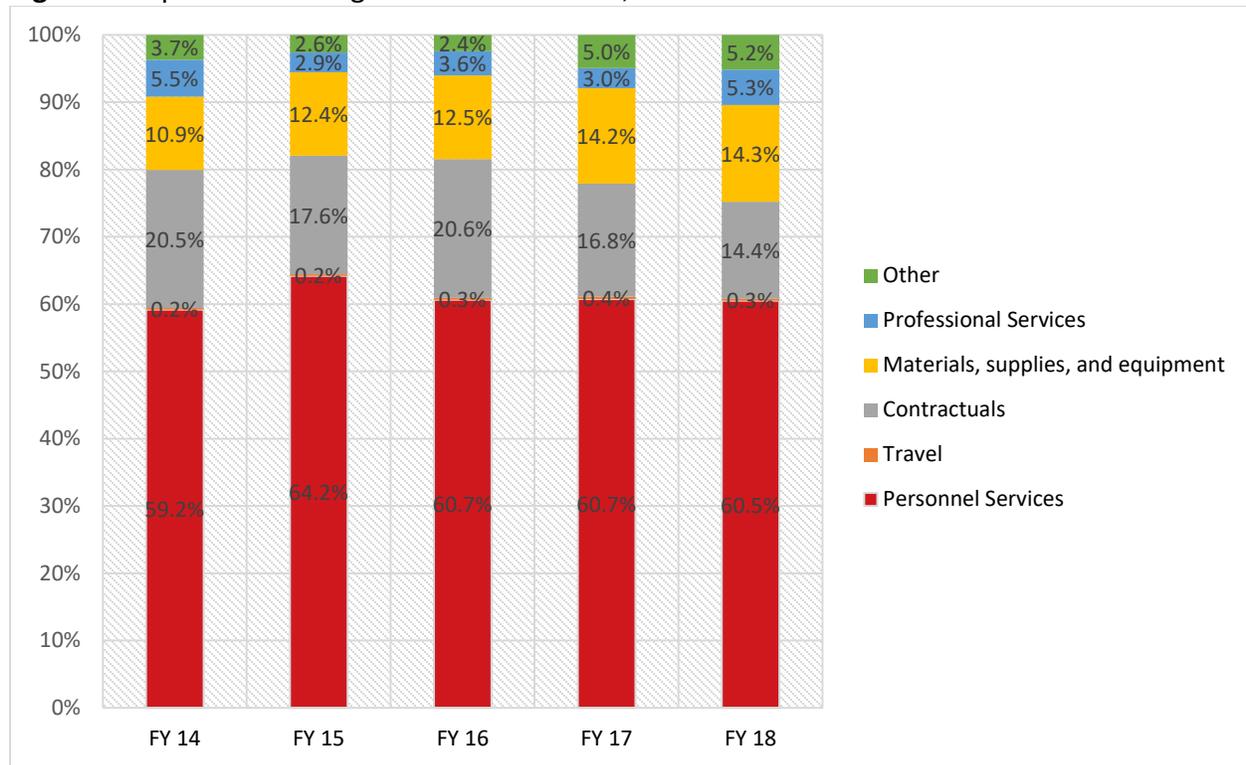
and supplies include fuel purchases, IT equipment, vehicle acquisitions-fixed assets, and office supplies. Professional services include legal counsel, auditor services, governmental affairs, accounting support, and civil support.

**Figure 5:** Expenditure categories for SLFPA-West, FY2014-2018



Source: SLFPA-West budget reports, authors' calculations

**Figure 6:** Expenditure categories for SLFPA-East, FY2014-2018



Source: Budget reports for SLFPA-East, East Jefferson, Orleans and Lake Borne, authors' calculations

**Special Case: Gulf Intercoastal Waterway West Closure Complex (WCC)**

The West Closure Complex is a critical piece of infrastructure within the HSDRRS for southeast Louisiana and was constructed by U.S. Army Corps of Engineers contractors to reduce flood risks to West Bank residents in Orleans, Jefferson, and Plaquemines parishes. This has made operation of the WCC a strong model for cross-jurisdictional and regional flood-prevention management.

Following construction, the WCC has been maintained and staffed by SLFPA-West with financial contributions by Plaquemines Parish Government. In this arrangement, 60% of funding is provided by West Jefferson Levee District, 20% is provided by Algiers Levee District, and 20% is provided by Plaquemines Parish Government. As explained by SLFPA-West staff, this distribution is based on the percentage of water runoff and drainage contributed by each jurisdiction. Due to the unique partnership between two distinct jurisdictions with their independent budgetary and bureaucratic processes, there have occasionally been instances when the contributed expenditures have not been provided for at the same time. But according to conversations with staff on both sides of the arrangement, SLFPA-West and Plaquemines Parish work well together in sharing expenditures for maintenance and operation of the WCC.

**Special Case: Inner Harbor Navigation Canal (IHNC) Lake Borgne Surge Barrier**

Another part of HSDRRS, the IHNC Lake Borgne Surge Barrier was also constructed by the Army Corps of Engineers to protect St. Bernard Parish and the East Bank of New Orleans from storm

surge associated with hurricanes and other storms. Like the WCC, following its completion, responsibility for the infrastructure has fallen to local government.

Today, SLFPA-East fully operates and maintains the IHNC Lake Borgne Surge Barrier, avoiding the cost-sharing arrangement seen with SLFPA-West, Plaquemines Parish, and the WCC, but does coordinate closely with the U.S. Army Corps of Engineers and U.S. Coast Guard. They also work closely with the Port of New Orleans, railroads, and other stakeholders that are affected by use of the IHNC Lake Borgne Surge Barrier. However, expenses are divided across responsibilities with flood protection and navigation concerns managed separately. In this way, SLFPA-East's relationship to the IHNC Lake Borgne Surge Barrier represents a different but equally important example of how effective flood risk management by levee districts can require collaboration across governmental entities.

### SLFPA Expenditure Outlook

Spending on operations and maintenance will make up the lion's share of levee district budgets. A 2012 study by the RAND Corporation estimated that post-Katrina investments in the HSDRRS would increase annual expenditures on operations and maintenance by \$6.8m to \$8.5m beyond the pre-Katrina cost of roughly \$34.8m annually to operate and maintain existing flood protection infrastructure.<sup>47</sup> Considering the system as a whole and updating those estimates for inflation would imply a total cost of roughly \$50.9m to \$51.8m today to operate and maintain the HSDRRS.

These estimates align with data on operations and maintenance expenditures provided in HSDRRS budgets (see Table 6). In 2018, the two SLFPAs had annual revenues of just over \$70.5m,<sup>48</sup> indicating that 68% of revenues were used for operations and maintenance of the HSDRRS.<sup>49</sup> When looking at each regional authority independently, expenditures were 23% of total revenues in SLFPA-East and 60% of total revenues in SLFPA-West.

**Table 6: Summary of Annual HSDRRS Expenditures on Operations and Maintenance**

<b>Levee District</b>	<b>HSDRRS Total</b>
SLFPA-East	\$28,079,277
SLFPA-West	\$10,783,191
Pontchartrain Levee District	\$617,231
Plaquemines Parish	\$8,258,083
<b>TOTAL</b>	<b>\$47,737,782</b>

Source: Levee district reports compiled by the Coastal Protection and Restoration Authority

The expenditure responsibility for each individual levee district within the regional flood protection authorities is provided in Table 7. When comparing these expenditures to the tax

<sup>47</sup> Miller, Trey, Financing the Operation and Maintenance Costs of Hurricane Protection Infrastructure: Options for the State of Louisiana. Santa Monica, CA: RAND Corporation, 2012. [https://www.rand.org/pubs/technical\\_reports/TR1223.html](https://www.rand.org/pubs/technical_reports/TR1223.html).

<sup>48</sup> Does not include one-time \$747.9m funding from the U.S. Army Corps of Engineers.

<sup>49</sup> An assessment of the adequacy of historical expenditures is beyond the scope of this study, but it should be noted that historical expenditures may be affected by deferred maintenance that could lead to higher costs in the future.

revenues for each district presented earlier in the report, a similar picture emerges showing that HSDRRS expenditures represent a large portion of total revenues for each area.

**Table 7: Annual HSDRRS Expenditures on Operations and Maintenance by Levee District**

Region	Levee District	HSDRRS Total
SLFPA-East	East Jefferson Levee District	\$4,800,000
	Lake Borgne Basin Levee District	\$5,179,277
	Orleans Levee District	\$18,100,000
SLFPA-West	Algiers Levee District	\$999,554
	West Jefferson Levee District	\$9,783,637

Source: Levee district reports compiled by the Coastal Protection and Restoration Authority

Looking to the future, larger investments that will be required to maintain the system may generate spikes in spending to levels well above the historical data presented in Table 6. For example, planned maintenance to dewater major structures within SLFPA-West on 5-year intervals are expected to add \$1.1m in 2020 and 2025 as well as \$3.3m in 2030 to dewater the West Closure Complex.<sup>50</sup> These one-time costs may need to be supported through grants or intergovernmental transfers from regional, state, or federal partners that focus on specific projects. Moreover, ongoing environmental changes may increase costs due to more frequent storms that increase operating costs. Similarly, rising sea levels and coastal land loss outside of the HSDRRS may increase costs to maintain the system and provide a similar level of storm protection in future years. Maintaining the system at the lowest cost will require ensuring levee districts have the revenues to make timely investments to avoid accumulating a backlog of deferred maintenance and maintain a high degree of coordination and flexibility within each regional authority.

## Summary and Conclusions

Since their establishment by the Louisiana Legislature from Act 1 of the 2006 First Extraordinary Session, SLFPA-East and SLFPA-West have worked to better align regional efforts across historical levee district boundaries. These changes have helped other levee districts across the state become more modernized, standardized, and accountable in terms of their financing and governance. But challenges remain, particularly when it comes to utilizing revenues across levee district lines and achieving true regional coordination and cooperation for flood protection purposes.

While it may not always be obvious, there are often sizeable benefits to prioritizing cooperation and a regional approach when it comes to protecting people, property, and land beyond historic or traditional political boundaries. While the direct benefits of a flood control project in St. Bernard Parish might not be apparent to residents in nearby parishes, certain investments to control flood risk in St. Bernard Parish have broader regional effects. When sound scientific modeling demonstrates those types of regional dependencies, a regional flood protection authority must have the flexibility to direct resources where they are needed most to

<sup>50</sup> SLFPA-West 10-year O&M Outlook (January 2018).

accomplish shared flood protection goals. Floodwaters will drain somewhere, and they will not discriminate based on tax jurisdictions or eligibility to vote in a local election.

The creation of the SLFPAs acknowledges the reality and importance of a shared interest in flood protection. They also represent a bridge between how Louisiana has historically managed flood risk—at a very local level—with how flood risk must be managed today and into the future—guided by shared regional interests with support from the state and federal partners to coordinate across multiple governance boundaries. By retaining levee districts as the primary financing entities and requiring local jurisdictions to identify and agree up on shared purposes, Louisiana has limited the ability of the SLFPAs and other regional levee authorities to fulfill the aims of their mission.

The existing requirement that tax dollars from one jurisdiction can be spent in another only for a “shared purpose” creates a dynamic that is particularly difficult for low resource areas. While certain activities (e.g., operating a flood gate) might easily be seen as serving a shared purpose while others (e.g., local drainage) might not, there will be a range of projects in between that have differing levels of impact on nearby jurisdictions. In the face of uncertainty about the benefits that might accrue to nearby jurisdictions, it is likely that low resource areas will face challenges finding financial support for projects where the shared purpose is not immediately obvious. This leaves low resource areas more vulnerable to flooding, which over time may reduce property values and will only make this challenge more difficult to overcome.

Addressing the issue of encouraging regional efforts towards flood protection and prevention may also require addressing other challenges, such as how levee districts are governed, particularly when it comes to representation on levee boards. The constitutional changes and laws adopted to create the SLFPAs were intended to ensure greater accountability and coordination. For the levee districts put under these authorities, this came with the benefit of the ability to pool resources and work more regionally, but it also came with a sacrifice of fully local control over their respective levee boards. Instead, Orleans, East Jefferson, and St. Bernard have only one representative each on SLFPA-East out of 9 board members; and Algiers and West Jefferson have two each on SLFPA-West out of 7 board members. In the case of SLFPA-East, the representation requirements mean that local representatives do not make up a majority of the board, which could undermine local support for raising revenue, or other decisions made by the authority.

Resolving these issues would not only help the SLFPAs and the Greater New Orleans Area, but could clarify for other levee authorities across the state how they can successfully coordinate and cooperate as part of flood protection regions, not just as isolated parishes. Changes that focus on improving regional flood protection governance are changes that will make regional flood protection more effective.

### Recommendations

Over the course of our research, we have encountered several structural governance and finance limitations that – if changed – might improve or simplify regional flood protection in South Louisiana.

- The constitutional authority to levy a property tax of up to 5 mills should be extended to all levee districts to provide a minimum level of funding to each levee district and facilitate broader local investments in flood prevention. Otherwise, legislative creation of new levee districts amounts to unfunded mandates that set them up for failure without offering meaningful protection to residents in newly created districts.
- An independent process for establishing “shared purpose” should be established to provide guidance to local districts in negotiating projects that may provide benefits beyond a single jurisdiction. This process could be created by a single regional authority, through a state scientific advisory group, or by leveraging one of the existing advisory boards. For example, the legislature could give the statutory authority to the Governor’s Advisory Commission on Coastal Protection, Restoration and Conservation to make such determinations, or CPRA could administratively engage a scientific advisory board to provide guidance.
- Take all possible measures to ensure that regional levee authorities are representative of the diverse local population while continuing to value a range of expertise and experience.

## Appendix A: Composition of Levee Districts

**Table A1:** Comprehensive listing of Levee Districts including parishes, or portions thereof, in each district

Region	Levee District	Parishes
<b>SLFPA-EAST</b>	East Jefferson Levee District	Jefferson
	Lake Borgne Basin Levee District	St. Bernard
	Orleans Levee District	Orleans
<b>SLFPA-WEST</b>	Algiers Levee District	Orleans
	West Jefferson Levee District	Jefferson
<b>OTHER HSDRRS</b>	Plaquemines Parish	Plaquemines
	St. Charles Parish	St. Charles
<b>OTHER LEVEE DISTRICTS</b>	Atchafalaya Basin Levee District	Ascension, Assumption, Iberia, Iberville, Pointe Coupee, St. Landry, St. Martin, West Baton Rouge
	Bossier Levee District	Bossier, Red River
	Caddo Levee District	Caddo
	Cheniere Plain Coastal Restoration and Protection Authority	Calcasieu, Cameron, Vermillion
	Fifth Louisiana District	Concordia, East Carroll, Madison, Tensas
	Grand Isle Independent Levee District	Jefferson
	Iberia Parish Levee, Hurricane, and Conservation District	Iberia
	Lafitte Area Independent Levee District	Jefferson
	Lafourche Basin Levee District	Ascension, Assumption, St. Charles, St. James, St. John the Baptist
	Natchitoches Levee and Drainage District	Natchitoches
	Nineteenth Louisiana Levee District	Grant
	North Bossier Levee and Drainage District	Bossier
	North Lafourche Conservation, Levee and Drainage District	Lafourche
	Pontchartrain Levee District	Ascension, East Baton Rouge, Iberville, St. Charles, St. James, St. John
	Red River, Atchafalaya, and Bayou Boeuf Levee District	Avoyelles, Rapides, St. Landry, St. Mary
	Red River Levee and Drainage District	Desoto, Red River
	South Lafourche Levee District	Lafourche
	Squirrel Run Levee District	Iberia
	St. Mary Levee District	St. Mary
	St. Tammany Levee, Drainage, and Conservation District	St. Tammany
Tangipahoa Levee District	Tangipahoa	
Tensas Basin Levee District	Caldwell, Catahoula, Franklin, LaSalle, Morehouse, Ouachita, Richland, West Carroll	
Terrebonne Levee and Conservation District	Terrebonne	

Source: La. R.S. 38:291 (<http://legis.la.gov/legis/Law.aspx?d=95196>)