



SHELTER FROM THE STORM: HOW MUCH HURRICANE PROTECTION IS AUTHORIZED FOR THE NEW ORLEANS AREA?

An Issue Paper by the Tulane Institute on Water Resources Law and Policy¹

November 13, 2020

I. ABSTRACT

History and the 2020 hurricane season have demonstrated that the New Orleans area is dangerously susceptible to hurricanes and their related storm impacts. The system of levees and flood protection infrastructure that surrounds the New Orleans area, now commonly known as the Hurricane and Storm Damage Risk Reduction System, has evolved in terms of plan specifics since its original authorization as the Lake Pontchartrain and Vicinity Project in the Flood Control Act of 1965. Increased hurricane frequency and strength over the years due to climate change has created the need for an infrastructure that protects New Orleans from flood events to be continually updated to provide even greater protection. However, to seriously modify the system would require that the Federal Sponsor of the project, here the Army Corps of Engineers, obtain new congressional authorization for such an undertaking. This lengthy process would take up time that New Orleans simply may not have. This paper will examine the original congressional authorization for the Lake Pontchartrain and Vicinity Project in the Flood Control

¹ Principal Authors: Portia Mastin, Senior Research Fellow, Mark Davis, Director, and Christopher Dalbom, Assistant Director, Tulane Institute on Water Resources Law and Policy. The Institute and authors also gratefully thank the Walton Family Foundation and the Foundation for Louisiana, whose support helped make this paper possible. Special acknowledgements are due to Thuy Le, James Nieset, and the Institute's undergraduate and law student research assistants. We would also like to thank those who took the time to review and comment on this paper as it took shape.

Act of 1965, for that of a Standard Project Hurricane, and analyze how its definition might be interpreted to allow for a measure of enhanced protection without new authorizations. The paper will also compare that authorization to the post-Hurricane Katrina emergency and appropriative supplemental laws which authorize the current Hurricane and Storm Damage Risk Reduction System, and will analyze how those acts can be read together to clarify that the Army Corps of Engineers does not need new authorization to periodically enhance the system, because the 1965 authorization already allows for it.

II. INTRODUCTION

The authorized level of protection for the Lake Pontchartrain and Vicinity Project/the Hurricane and Storm Damage Risk Reduction System is for that of a Standard Project Hurricane. The emergency supplemental legislation passed after Hurricane Katrina neither modified nor replaced that. The 100-year storm event standard that is required for the National Flood Insurance Program is not the maximum authorized level of protection - it is merely the minimum standard to acquire certification for the National Flood Insurance Program. The Flood Protection Act of 1965, which originally authorized the Lake Pontchartrain and Vicinity Hurricane Protection Project, authorized protection against a Standard Project Hurricane, perhaps a one in 200 to 300 year event, which is higher than the standard required by the National Flood Insurance Program. Further, the Standard Project Hurricane's definition is written to allow for fluidity in interpretation, thus is arguably higher than the estimated 200-300-year event standard in 1965. The emergency supplemental and appropriative measures instituted after Hurricane Katrina to ensure National Flood Insurance Compliance did not alter the original authorization standard. Therefore, that 1965 authorization for the Standard Project Hurricane level of

protection still stands. No additional Congressional authorization is required to implement such a project.

III. BACKGROUND

In 1965, Hurricane Betsy struck the Gulf Coast of the United States, leaving parts of Louisiana, Mississippi, Alabama, and Florida devastated.² This event and its subsequent damage demonstrated to Congress that greater flood protection measures were needed. The result was Congress' passage of the Flood Control Act of 1965.³ In accordance with Flood Control Acts and Water Resources Development Acts ("WRDAs"), the Army Corps of Engineers conducts studies for, implements, operates, and maintains water resources projects throughout the United States as a part of its civil works program, as authorized by Congress.⁴ Although the Chief of Engineers has discretionary authority to alter the *plans* chosen for these water resources projects, they do not have the authority to modify the congressional *authorization* for such projects.⁵ The Flood Control Act of 1965 authorized many such water resource projects throughout the United States, including the Lake Pontchartrain and Vicinity Hurricane Protection Project ("LPV") in Section 204.⁶ This section authorized a federal sponsor, the Army Corps of Engineers ("Army Corps," "Corps of Engineers," or "Corps"), to study and provide protection for the New Orleans

², Arnold L. Sugg, *The Hurricane Season of 1965*. Vol. 94:3. Monthly Weather Review. 183, 185-90. 1966.

³ Douglas A. Kysar & Thomas O. McGarity, *Did NEPA Drown New Orleans? The Levees, The Blame Game, And the Hazards of Hindsight*. Vol. 56:179. Duke Law Journal. 180, 186. (2006).

⁴ Nicole T. Carter & H. Steven Hughes, *Army Corps of Engineers Water Resources Activities: Authorization and Appropriation*. CRS Report for Congress, at 1. (2006).

⁵ See generally Edelman, Lester, Chief Counsel for the Army Corps of Engineers, "Memorandum for the Chief of Engineers, Lake Pontchartrain Hurricane Protection Project, Louisiana," (March 2, 1983), (describing the Chief's authority to modify the Lake Pontchartrain and Vicinity Project to the high level plan).

⁶ Pub. L. No. 89-298 Sec. 204, 79 Stat. 1073, 1077. (1965) "The project for hurricane-flood protection on Lake Pontchartrain, Louisiana, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 231...").

area against the Standard Project Hurricane (“SPH”).⁷ The authorization was based upon a letter from the Secretary of the Army, transmitting the Chief Engineer’s Report (“Chief’s Report”) on the studies and processes done for the formulation of the SPH and the LPV.⁸ Although the Flood Control Act is a federal authorization act, the Army Corps of Engineers works with state and local authorities to implement and maintain the LPV project.⁹

The SPH level of protection was authorized in accordance with the recommendation of the Chief of Engineers, and defined as, “[a hurricane] that may be expected from the most severe combination of meteorological conditions that are considered reasonably characteristic of the region.”¹⁰ This definition in the Chief’s Report did not specify a particular year event level, but the Report gave multiple examples citing the 200-year event frequency for various storm characteristics of the SPH.¹¹ The Government Accountability Office has since estimated the SPH to be equivalent to a 200-300-year event (in 1965), meaning a storm event that had a 1 in 200-300-year chance of occurrence.¹² The Saffir-Simpson scale, which classifies hurricane strength by category, had not yet been invented, but the Government Accountability Office has also provided an estimation for that, reporting that the SPH would be categorized as approximately a “fast moving category three hurricane” as measured in 1965.¹³

⁷ *Id.*; see also Letter from the Secretary of the Army Transmitting a Letter from the Chief of Engineers, Department of the Army. *Lake Pontchartrain and Vicinity, Louisiana* at 46, 61. (1965). [hereinafter Letter from the Chief of Engineers].

⁸ *Id.*

⁹ Anu Mittal, U.S. Gov’t Accountability Off., Pub. No. GAO-05-1050T, Testimony Before the Subcommittee on Energy and Water Development, Committee on Appropriations, House of Representatives, Army Corps of Engineers: Lake Pontchartrain and Vicinity Hurricane Protection Project, at 3. (2005). [hereinafter GAO LPV Hurricane Protection Project].

¹⁰ Letter from the Chief of Engineers, at 46.

¹¹ *Id.* at 9, 134, 165.

¹² GAO LPV Hurricane Protection Project, at 1; See also Anu Mittal, U.S. Gov’t Accountability Off., Pub. No. GAO-06-322T, Testimony Before the Committee on Homeland Security and Governmental Affairs, Hurricane Protection: Statutory and Regulatory Framework for Levee Maintenance and Emergency Response for the Lake Pontchartrain Project, at 4-5. (2005). [Hereinafter GAO Emergency Response Report].

¹³ *Id.*

The Army Corps of Engineers proposed and studied multiple plans to achieve the authorized goal of SPH-level protection for the New Orleans area.¹⁴ The two most highly-favored options at the time were the Barrier Plan and the High Level Plan, both of which were projected to protect the area from the SPH.¹⁵ The Corps of Engineers initially chose the Barrier Plan because they believed that it would be less costly and more quickly implemented; however, lawsuits, along with environmental and economic concerns throughout the 1970s and early 1980s plagued the planning process.¹⁶ Eventually the Corps settled upon the High Level Plan.¹⁷ The project, however, continued to experience setbacks throughout the end of the 20th and beginning of the 21st centuries.¹⁸

By 2005, when Hurricane Katrina hit the Gulf Coast, the High Level plan for the LPV project was still not completed to SPH-level protection, and was not expected to be completed until 2015.¹⁹ The combination of Hurricane Katrina, a lack of proper planning and response, the incomplete, lower level of protection of the LPV project, and other engineering failures caused mass devastation in New Orleans.²⁰ Due to the subsequent flooding and destruction caused by this event, Congress passed several emergency appropriative and supplemental measures to strengthen the LPV (in chronological order, Public Laws 109-148, 109-234, and 110-252).²¹ Congress also authorized the Army Corps of Engineers to design and implement the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (“HSDRRS”), a system

¹⁴ Douglas A. Kysar & Thomas O McGarity, *Did NEPA Drown New Orleans? The Levees, The Blame Game, And the Hazards of Hindsight*, at 186-87.

¹⁵ GAO LPV Hurricane Protection Project, at 3-6.

¹⁶ *Id.*

¹⁷ *Id.*; See also Douglas A. Kysar & Thomas O. McGarity, *Did NEPA Drown New Orleans? The Levees, The Blame Game, And the Hazards of Hindsight*.

¹⁸ GAO LPV Hurricane Protection Project, at 1.

¹⁹ *Id.* at 1-2.

²⁰ Douglas A. Kysar & Thomas O McGarity, *Did NEPA Drown New Orleans? The Levees, The Blame Game, And the Hazards of Hindsight*, at 191-199.

²¹ See Pub. L. No. 109-148 § 119 Stat. 2680 (2006); See also Pub. L. No. 109-234 § 120 Stat. 418 (2006); See also Pub. L. No. 110-252 § 122 Stat. 2323 (2008).

combining and strengthening the LPV project and the West Bank and Vicinity (“WBV”) project, to more comprehensively protect the area from hurricane and related flood damage.²² The LPV and WBV projects are periodically the subjects of General Re-evaluation Reports completed conjunctively by the Army Corps and the respective Southeast Louisiana Flood Protection Agencies.²³

Although the emergency appropriation and supplemental measures passed refer to both a 100-year event standard and the SPH, the HSDRRS currently only specifically calls for 100-year event level protection to facilitate compliance with the National Flood Insurance Program (“NFIP”).²⁴ The NFIP was created by the National Flood Insurance Act, passed and implemented in 1968.²⁵ In order for regions to qualify for the NFIP, they need only meet the 100-year level of protection.²⁶ Currently, the Army Corps’ most recent HSDRRS Facts and Figures publication exclusively discusses the 100-year standard and makes no mention of the original SPH standard.²⁷ Further, in December 2019, the Corps published its most recent draft general re-evaluation reports on WBV and LPV projects; the finalized versions are expected in late 2021.²⁸ The LPV project draft report states that, “The LPV is designed to address the 1% AEP [100-year] hurricane and coastal storm event...” and briefly analyzes a 200-year and 500-

²² U.S. Army Corps of Engineers. *Greater New Orleans Hurricane and Storm Damage Risk Reduction System Facts and Figures Brochure*. (2018). Retrieved from: <https://www.mvn.usace.army.mil/Portals/56/docs/HSDRRS/HSDRRS%20Facts%20and%20Figures%20Brochure%20Jan%202018-web.pdf>.

²³ See U.S. Army Corps of Engineers, New Orleans District. *Lake Pontchartrain and Vicinity General Re-evaluation Report*. (2019). Retrieved from: <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/studies/LPV-GRR/>; U.S. Army Corps of Engineers, New Orleans District. *West Bank and Vicinity General Re-evaluation Report*. (2019). Retrieved from: <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/studies/WBV-GRR/>.

²⁴ See *id.*; See also Pub. L. No. 109-148 § 119 Stat. 2680 (2006); See also Pub. L. No. 109-234 § 120 Stat. 418 (2006).

²⁵ See 42 U.S.C. § 400.

²⁶ See 44 C.F.R. § 59.1.

²⁷ U.S. Army Corps of Engineers. *Greater New Orleans Hurricane and Storm Damage Risk Reduction System Facts and Figures Brochure*. (2018).

²⁸ McCormack, Frank. *Corps Offers Plan to Raise Nola Levees*, The Waterways Journal, (Dec. 16, 2019). Retrieved from: <https://www.waterwaysjournal.net/2019/12/16/corps-offers-plan-to-raise-nola-levees/>.

year alternative, with no mention of the SPH.²⁹ The Army Corps declines to seriously consider protections against those higher level events based on cost-benefit analyses.³⁰ When interviewed about this, a Corps spokesperson commented, “While the 200-year level of risk reduction alternative was competitive, its net benefits were lower than that of the 100-year level of risk reduction.”³¹ The Army Corps has further retained the position that the 100-year standard supplanted the SPH authorization, and that the SPH no longer exists. Thus, even if the Corps chose to utilize those higher standards in the GRR, it would need to obtain Congressional authorization to do so. Throughout the process of Congress’s passage of the emergency appropriative and supplemental measures resulting from Hurricane Katrina and the Army Corps’ implementation of HSDRRS, the SPH standard was seemingly dropped, with the 100-year NFIP-qualifying standard apparently replacing it. There is no statutory authority for that replacement.

IV. ANALYSIS AND DISCUSSION

The Flood Control Act of 1965 was passed in response to a devastating storm event, Hurricane Betsy, and the implementation of HSDRRS and passage of the 2006-2008 emergency supplemental and appropriative measures were in response to yet another devastating storm event, Hurricane Katrina.³² Although these pieces of legislation recite different standards for the level of protection for the LPV project, the original Flood Control Act of 1965 was not repealed, nor was it superseded by the post-Katrina supplemental laws. Therefore, Congressional authorization has already been granted and still stands, allowing the Army Corps and local

²⁹ U.S. Army Corps of Engineers, *Lake Pontchartrain and Vicinity, LA General Re-Evaluation Report*, at 12, 200, (Dec. 1, 2019).

³⁰ *Id.*

³¹ Schleifstein, Mark. *15 years after Katrina, New Orleans levees are in the best shape ever. Experts say it’s not enough.*, (Aug. 24, 2020). Retrieved from: https://www.nola.com/news/environment/article_80c27be8-e3e7-11ea-bbf9-1731ebdd9171.html.

³² See Douglas A. Kysar & Thomas O. McGarity. *Did NEPA Drown New Orleans? The Levees, The Blame Game, And the Hazards of Hindsight*; See also U.S. Army Corps of Engineers. *Greater New Orleans Hurricane and Storm Damage Risk Reduction System Facts and Figures Brochure*.

sponsor to construct the levee system in the LPV project to a level which will protect against the SPH. The Army Corps and local sponsor do not need to conduct their initial phases³³ to obtain authorization again, and Congress does not need to go through this authorization process again.

a) The Standard Project Hurricane Definition and Formulation

The SPH event is defined as, “one that may be expected from the most severe combination of meteorological conditions that are considered reasonably characteristic of the region.”³⁴ At the time of the LPV project’s original authorization, this corresponded with approximately a 200-300-year storm event, and is estimated as what is now classified a fast-moving category three hurricane.³⁵ The SPH was created to be fluid; thus, the broad definition, and the use of limited storm history and statistics, which allowed more flexibility in its inception.³⁶ The scientists and policy-makers who researched the standard that would then become the SPH definition created it so that it could change geographically, based on what region it was applied to.³⁷ In the Chief’s Report, different year-event standards are referred to for the SPH, demonstrating that it is flexible depending on the region, and storm effects, such as wave runup and storm surge.³⁸ The SPH should change over time to reflect the increase in intensity and frequency of hurricane events in the Gulf. Based on the original language and intent of the statute, the Corps is actually authorized to enhance the LPV project up to protection against what the SPH would be today. That level would probably provide even greater

³³ See Congressional Research Service, “Army Corps of Engineers: Water Resource Authorization and Project Delivery Processes,” at 7-16 (April 19, 2019), (describing the phases involved in an Army Corps of Engineers Water Resource Project: from authorization, to feasibility studies, to Chief’s Reports, to preconstruction and engineering).

³⁴ Letter from the Chief of Engineers, at 46.

³⁵ GAO LPV Hurricane Protection Project, at 4.

³⁶ See Howard E. Graham & Dwight E. Nunn, Dep’t of Commerce, Nat’l Hurricane Research Project Report No. 33. *Meteorological Considerations Pertinent to Standard Project Hurricane, Atlantic and Gulf Coasts of the United States* (1959).

³⁷ *Id.* at 12-13.

³⁸ Letter from Chief of Engineers, at at 9, 46, 111, 134, 165.

protection than that for a 200-300-year event.³⁹ The SPH's flexibility is evidenced further by the technological and scientific advancement that initiated the National Oceanic and Atmospheric Administration's revision of criteria for determination of an SPH event standard in 1972.⁴⁰ That 1972 revision demonstrates that the concept is malleable and conducive to change over time. An even higher standard could be appropriate today than when the LPV project was authorized in 1965 and when it was revised in 1972.

Further, when looking to the intent of Congress in deciding to adopt the Chief of Engineers' recommendation to use the SPH level as the appropriate protection level for the LPV in 1965, it is clear that this standard, as opposed to a numerical 100, 200, or 300-year event standard, was chosen in order to allow it to develop over time, as hurricanes and hurricane patterns change, and allow the appropriate level of protection to change with it. Congress could have easily specified a numerical standard if it had intended that, much like it used the 100-year event standard only three years later in the 1968 National Flood Insurance Act.⁴¹ However, Congress chose not to do so and instead stayed consistent with the Chief of Engineers recommendation for the broader SPH level of protection. This decision keeps Congress from having to modify the authorization and the Corps from needing to perform new studies constantly as the rate and strength of hurricanes change over time.

³⁹ Walsh, J., et al. 2014: Ch. 2: Our Changing Climate. *Climate Change Impacts in the United States: The Third National Climate Assessment*, U.S. Global Change Research Program, 19-67, (2014) Retrieved from: <https://nca2014.globalchange.gov/report/our-changing-climate/introduction>.

⁴⁰ See Team Louisiana, *The Failure of the New Orleans Levee System During Hurricane Katrina*, iv. (2006); See also Hydrometeorological Branch, Nat'l Oceanic & Atmospheric Admin., Memorandum HUR 7-120, *Preliminary Revised Standard Project Hurricane Criteria for the Atlantic and Gulf Coasts of the United States*, (1972).

⁴¹ See 44 C.F.R. § 59.1.

b) Legal Analysis of the Flood Control Act of 1965 and the Emergency Post-Katrina Supplemental Laws

None of the subsequent Flood Control Acts or Water Resources Development Acts have modified the authorization that the Army Corps received in the Flood Control Act of 1965. The only acts passed after the Flood Control Act of 1965 that might be suggested to modify the authorization are the aforementioned post-Katrina emergency supplemental and appropriation measures. However, their purpose was to ensure that the area was able to qualify for the NFIP so that the region had appropriate flood insurance for storm events. These bills are just that - supplemental; they do not restrict or modify the original authorization.

According to basic principles of statutory construction, courts must first consider the plain language of the statute at issue.⁴² In that consideration, “[i]t is well established that ‘when the statute's language is plain, the sole function of the courts--at least where the disposition required by the text is not absurd--is to enforce it according to its terms.’”⁴³ And, “[w]here the language is plain and admits of no more than one meaning, the duty of interpretation does not arise and the rules which are to aid [in the clarification of] doubtful meanings need no discussion.”⁴⁴ The plain language of the post-Katrina public laws do not, in actuality, restrict the Army Corps of Engineers’ prior authorization to protect the LPV project area from a SPH; the language suggests the opposite, as will be demonstrated in the upcoming analysis.

⁴² See, e.g., *Jimenez v. Quarterman*, 555, U.S. 113, 118 (2009) (“As with any question of statutory interpretation, our analysis begins with the plain language of the statute.”).

⁴³ *Lamie v. United States Tr.*, 540 U.S. 526, 534 (2004). See also, e.g., *Dodd v. United States*, 545 U.S. 353, 359 (“Although we recognize the potential for harsh results in some cases, we are not free to rewrite the statute that Congress has enacted.”)

⁴⁴ *Caminetti v. United States*, 242 U.S. 470, 485 (1917).

Further, statutes are not typically repealed by implication; express repeal is favored.⁴⁵ The Supreme Court has more recently expressed the hesitancy to accept a repeal by implication by stating that “absent ‘a clearly expressed congressional intention,’ ... [a]n implied repeal will only be found where provisions in two statutes are in ‘irreconcilable conflict,’ or where the latter Act covers the whole subject of the earlier one and ‘is clearly intended as a substitute.’”⁴⁶ Courts have an obligation to give effect to both acts and not give preference to repeal. “The courts are not at liberty to pick and choose among congressional enactments, and when two statutes are capable of coexistence, it is the duty of the courts, absent a clearly expressed congressional intention to the contrary, to regard each as effective.”⁴⁷ In determining if there is an irreconcilable conflict between two statutes, the courts interpret the language of each statute.⁴⁸ Furthermore, courts have adopted their interpretive role as “against reading conflicts into statutes [as] a traditional tool of statutory construction.”⁴⁹ Here, the latter acts do not cover the entire subject of the earlier act and are not substitutes; the 1965 Flood Control Act is a much broader Act than the post-Katrina emergency supplemental measures, and they all are capable of coexistence.⁵⁰ When reading all the statutes together, the 100-year NFIP standard creates no conflict with the higher SPH standard in the Flood Control Act of 1965; in fact, enforcing that SPH standard will *ensure* NFIP compliance, because it exceeds that minimum standard.

The first of the three supplemental measures passed, Public Law 109-148, makes no mention of the 100-year standard of the NFIP.⁵¹ It instructs the Army Corps of Engineers, “...to *restore* the flood damage reduction and hurricane and storm damage reduction projects, and

⁴⁵ See *Morton v. Mancari*, 417 U.S. 535, 549 (1974).

⁴⁶ *Carcieri v. Salazar*, 555 U.S. 379, 395 (2009), quoting *Branch v. Smith*, 538 U.S. 254, 273 (2003).

⁴⁷ *Morton v. Mancari*, 417 U.S. 535, 551 (1974).

⁴⁸ *Id.*

⁴⁹ *Epic Sys. Corp. v. Lewis*, 138 S. Ct. 1612, 1630 (2018).

⁵⁰ See *Carcieri v. Salazar*, 555 U.S. 379, 395 (2009).

⁵¹ See generally Pub. L. No. 109-148 (2006).

related works, to provide the level of protection *for which they were designed*, at full Federal expense.” It further provides that an amount, “shall be used to accelerate completion of unconstructed portions of authorized hurricane, storm damage reduction and flood control projects in the greater New Orleans and south Louisiana area at full Federal expense.”⁵² Public Law 109-148’s inclusion of this language, “for which they were designed,” as well as “completion of unconstructed portions,” unambiguously refers to the original Congressional authorization – protection against the SPH.

The second law passed, Public Law 109-234, refers to compliance with both “100-year floodplain certification,” meaning the standard to qualify for the NFIP, as well as compliance with the SPH, stating “...new storm data that may require a higher level of protection in order to comply with the 100-year floodplain certification *and* standard project hurricane.”⁵³ By writing out each of these two standards separately, Congress indicates that the standards are different and both relevant to the HSDRRS. This use of conjunctive language demonstrates that this measure is meant to ensure compliance with both the NFIP and the originally authorized SPH level of protection. In the next section, “Construction,” Public Law 109-234 again refers to the 100-year standard, directing the Army Corps to, “... raise levee heights where necessary and otherwise enhance the existing [LPV] project and the existing [WBV] project to provide the levels of protection necessary to achieve the certification required for participation in the [NFIP]...”⁵⁴ While this section does not mention the SPH or the original authorization, it also does not restrict the project to the 100-year standard. The section merely instructs the Army Corps to raise levee heights to ensure that those projects comply with the NFIP. Further, even if this were construed

⁵² Pub. L. No. 109-148 Sec. 119 Stat. 2680 (2006). (emphasis added).

⁵³ Pub. L. No. 109-234 Sec. 120 Stat. 418 (2006). (emphasis added).

⁵⁴ *Id.*

to modify the project itself, it does not modify the *authorization* for the project. The authorization is a separate entity from the project, and though the project could change (for example, when the Corps was considering whether to use the Barrier Plan or High Level Plan in the 1970s), the authorization is broader than the project itself and can encompass many variations of the project.

Both of these post-Katrina emergency measures' use of language requiring compliance with both the NFIP and the original level of protection illustrates that they did not replace the original authorization in the Flood Control Act. Neither Public Law 109-148 nor 109-234 contains any language about superseding the original 1965 authorization; only language to ensure the project at least complies with the NFIP. That requirement is merely an addition to, not a replacement of, the 1965 SPH authorization.

In 2008, Congress passed Public Law 110-252, and a Project Partnership Agreement, which is a contract and not binding federal law, between the Army Corps and the Coastal Protection and Restoration Authority of Louisiana ("CPRA") was created.⁵⁵ Although Public Law 109-234 and 109-148 each discuss both the 100-year standard and the original project authorization level, Public Law 110-252 and the Project Partnership Agreement between the Army Corps and the CPRA only specifically mention the 100-year hurricane event standard.⁵⁶ This is, as both state, to ensure that the project receives certification for the NFIP, which requires at least that 100-year level of protection.⁵⁷ Public Law 110-252 states that the Army Corps is to use funds, "... to modify authorized projects in Southeast Louisiana to provide hurricane, storm

⁵⁵ Public Law 110-252 Sec. 122 Stat. 2323, 2348-2351 (2008); Project Partnership Agreement Between The Dept. of the Army and the Coastal Protection and Restoration Authority of Louisiana for the Lake Pontchartrain and Vicinity, Louisiana Project, at 1 (2008). [Hereinafter Partnership Agreement].

⁵⁶ *Id.*

⁵⁷ *Id.*

and flood damaged reduction in the greater New Orleans and surrounding areas to the levels of protection necessary to achieve the certification required for participation in the [NFIP]...”⁵⁸

Further, the Partnership Agreement recognizes the original authorization of the LPV in the Flood Control Act of 1965, and clarifies the three post-Katrina supplemental laws by stating:

WHEREAS, under... Public Law 109-148 and under... Public Law 110-252 authorized the Secretary of the Army, at full Federal expense, to accelerate completion of unconstructed portions of the *Original Project*;

WHEREAS, under... Public Law 109-234 and under... Public Law 110-252... modified the *Original Project* to authorize the Secretary of the Army, at full Federal expense, to reinforce or replace existing floodwalls, as necessary to *improve* the performance of the *Original Project* and to armor critical elements...;

WHEREAS, under... Public Law 109-234... and under... Public Law 110-252... modified the *Original Project* to authorize the Secretary of the Army to raise levee heights where necessary and otherwise *enhance* the *Original Project* to provide the level of protection necessary to achieve the certification required for participation in the [NFIP].⁵⁹

Therefore, as described above regarding the “Construction” section of Public Law 109-234, these modifications “enhance” and “improve” *only* the “Original Project,” (defined as the LPV project), and do not have any effect on the *authorization* for the original project.⁶⁰ Further, the inclusion of the language, “to improve,” and “to enhance,” unambiguously means that the

⁵⁸ Public Law 110-252, at 2349.

⁵⁹ Partnership Agreement at 1. (emphasis added).

⁶⁰ See *Id.*

“Original Project,” the LPV project, was not modified to a lower level of protection—only that the project must comply with the NFIP requirements *in addition to*, not in place of, the original SPH authorization. These public laws do not restrict the post-Katrina levee system authorization to a 100-year standard; they simply call for *at least* a 100-year standard in order to qualify for the NFIP. The 100-year NFIP requirements and the original project protection requirements are not mutually exclusive; the 100-year standard fits within the SPH standard. Further, these supplemental laws were passed post-Katrina primarily in order to repair and improve the system, as well as to ensure New Orleans area residents could get flood insurance, and thus would not have lowered the authorized standard. Indeed it is inconceivable that when faced with the greatest natural disaster and civil engineering failure in American history, Congress would have responded by lowering the level of authorized protection for the New Orleans metropolitan area. Therefore, these laws and the Partnership Agreement do not supersede or modify to restrict the Flood Control Act of 1965, which is still in effect. If Congress had intended to replace the existing 1965 SPH authorization, it would have explicitly provided that as a purpose of the supplemental measures.

**c) Further Recognition and Discussion of the Original Standard Project
Hurricane Authorization and its Importance**

The emphasized importance of the SPH level of protection in the Letter from the Chief of Engineers, cited by Congress in the Flood Control Act of 1965, demonstrates that it would not have been repealed for a lower authorization standard. That document states, “Because of the serious threat to human life and property involved, the design of the [LPV] project *must* be based

on the [SPH] for the region...”⁶¹ Further, the original SPH authorization level and its equivalency as a 200-300-year event and approximately a category three hurricane have been continually discussed after Hurricane Katrina in official governmental settings, demonstrating that it was the original standard authorized and continues to be the standard. For example, the U.S. Government Accountability Office gave testimony and published a study shortly after Katrina which repeatedly references the original authorization for the LPV project.⁶² The Government Accountability Office also recognized the original SPH level in another report on emergency response for the LPV project.⁶³ The U.S. Department of the Interior held a subcommittee hearing on water resources, flood protection, and planning for rebuilding the Gulf Coast, which also discussed the SPH level and made no mention of lowering the authorization level for the LPV project.⁶⁴ Additionally, as these documents and hearings imply, the purpose of the post-Katrina bills was to strengthen and enhance the LPV project, not to lower the authorization level. While the current system is certainly more robust than the previous project from an engineering standpoint, the higher authorization combined with current engineering and hydrological models could provide an even better system in the future, with no need for

⁶¹ Letter from the Chief of Engineers, at 61. (emphasis added).

⁶² GAO LPV Hurricane Protection Project, at i, 1, 4, *stating*, (“The original project designs were developed based on the equivalent of what is now called a fast moving Category 3 hurricane that might strike the coastal Louisiana region once in 200-300 years.); *and*, (“...the Lake Pontchartrain hurricane project was designed to protect areas around the lake from flooding caused by a storm surge or rainfall associated with a standard project hurricane...”); *and* (“The original project designs were developed to combat a hurricane that might strike the coastal Louisiana region once every 200-300 years. The basis for this was the standard project hurricane...”)

⁶³ GAO Emergency Response Report, at i, 2. (2005), *stating*, (“Congress authorized the Lake Pontchartrain project to protect the New Orleans area from flooding caused by storm surge or rainfall associated with a hurricane that had the chance of occurring once in 200 years. This was termed as the ‘standard project hurricane’...”); *and*, (“The Lake Pontchartrain project was authorized in 1965 to protect New Orleans and the surrounding area from flooding associated with a ‘standard project hurricane.’ A standard project hurricane was expected to occur once every 200 years...”).

⁶⁴ U.S. Department of the Interior, Subcommittee on Water Resources and Environment Hearing on Expert Views on Hurricane and Flood Protection And Water Resources Planning For A Rebuilt Gulf Coast, *stating*, (“[the LPV project is] a plan designed to provide protection from hurricane flood and storm surge having an estimated frequency of about once in every 200 years.”); (“with 200-year flood protection, New Orleans has greater protection than many other urban areas.”).

additional Congressional authorization. Lowering the level of protection for the flood project after a major disaster, such as Hurricane Katrina, would be wholly counterintuitive. The purpose of these emergency measures was to quickly offer greater flood insurance protection to reduce the likelihood of uninsured catastrophic destruction such as that which occurred after Hurricane Katrina, and to further guarantee that flood insurance would be available to those who could be affected by other storm events in the area. The qualification for certification with the NFIP is a part of that, but it does not diminish the need for stronger and more comprehensive levee systems. Protection against a 100-year event to comply with the NFIP is only the minimum standard required by the post-Katrina public laws; these laws do not restrict or replace the original congressional authorization in 1965. The SPH level protection was initially sanctioned in 1965. Compliance with the NFIP or use of the actual plan and project that was chosen for the LPV project, does not change the fact that the Army Corps of Engineers has been authorized to increase the levee system's protection of the New Orleans area to protect against at least the SPH since 1965.

V. CONCLUSION

Congress authorized protection from a SPH in the Flood Control Act of 1965. Valuable time and effort does not need to be spent attempting to acquire authorization for a higher level than the 100-year event level; authorization for a higher level of protection is already in place. The Corps has been and is authorized for at least 200-300-year protection. The SPH definition's flexibility, purposely allowed for by the scientists and engineers who created it, permits consideration of the changing nature of weather patterns and climate over time. The SPH of 1965 would now occur more frequently and would be more intense, so the level of protection that the Army Corps is authorized to study, fund, and implement has quite probably increased to

be even greater than 200-300-year protection. The Army Corps and its Nonfederal Partners may move forward with conducting studies and project improvements to best protect the greater New Orleans area from hurricanes whose magnitude exceeds the level of the minimum protection required to comply with the NFIP. The process to fully implement a flood control project like the LPV takes years; therefore, the continuing existence of authorization in the Flood Control Act of 1965 provides efficiency that is crucial for such a large-scale flood control project renovation. Given the growing threats to the region, efforts to further reduce its vulnerability to storm risks using a combination of the existing authorities should be pursued sooner rather than later. One hurdle has already been cleared. There is no need to circle back and jump it again.