St Tammany Drainage and Conservation District.
Board Resolution

Resolution log Number 0001

A resolution approving a formal letter containing comments from the St. Tammany Levee, Drainage, and Conservation District in response to the Corps of Engineers St. Tammany Parish, Louisiana Feasibility Study.

Whereas The St. Tammany Levee, Drainage and Conservation District Board (Levee Board) has drafted a formal letter expressing comments and items regarding the St. Tammany, Louisiana Feasibility Study (Study) containing the Draft Integrated Feasibility Report with Draft Environmental Impact Statement.

Whereas the Corps (U.S. Army Corps of Engineers) is conducting the Study with the goal of reducing the severity of flood damages and risk to public health and safety caused by heavy rainfall, riverine flooding, tropical storms, and hurricanes.

Whereas the Levee Board will continue to support and collaborate with both the Study's Federal Sponsor, the Corps, and Non-federal sponsors, Louisiana's Coastal Protection and Restoration Authority and St. Tammany Parish Government, throughout the remainder of the study.

Whereas the study plan consisted of structural and nonstructural components for flood reduction in the coastal zone of St. Tammany Parish.

Whereas the comments are based on a culmination of meetings between the Levee Board members, community leaders, and stakeholders.

Whereas The Levee Board plans to present the letter to the Corps of Engineers before the 26th of July 2021.

This motion was passed on July 21, 2021 at the board meeting at Koop, Dr. by unanimous vote of the STLDCD

Cody A. Bruhl

Secretary of STLDCD
Cody Bruhl

St. Tammany Levee,
Drainage and Conservation District

The comments and items below are in response to the St. Tammany Parish, Louisiana draft Feasibility Study released by the U.S. Army Corps of Engineers (Corps) on June 11, 2021. The comments are based on a culmination of meetings between St. Tammany Levee, Drainage and Conservation District Board (Levee Board) members, community leaders and stakeholders.

Timeline of Events:

In 2017, the Levee Board began developing a flood protection master plan to address flooding in the St. Tammany Parish coastal zone. In 2018 the Levee Board, in conjunction with St. Tammany Parish Government and the Louisiana Coastal Protection and Restoration Authority (CPRA), hired the engineering firm of Neel-Schaffer to collect data, create a gap analysis, conduct a feasibility study, and design flood protection systems. The Levee Board put emphasis on a holistic approach to creating coastal flood protection. The holistic approach is consistent with successful flood protection systems that have been created elsewhere in the region. The Levee Board also took into consideration the human environmental aspect for all community stakeholders.

In October 2019, the U.S. Army Corps of Engineers announced it would conduct their own federally funded study to create a flood damage reduction plan in St. Tammany Parish. In January 2020, the Corps held its feasibility study kick-off meeting. By February 2020, the Levee Board had completed Phases 1 and 2 of their study and was working on Phase 3. The Levee Board study is a comprehensive storm surge reduction plan. The plan includes creating levees, using existing boundaries, barriers, and topographic features to achieve flood mitigation within the St. Tammany Parish Coastal region. This plan also was designed in the most cost effective and environmentally protective way.

The Levee Board provided the Corps with the completed phases of their feasibility study along with the latest data and cost analysis for inclusion into the Corps' study.

In January 2021, the Corps provided their Tentatively Selected Plan (TSP) for flood protection in St. Tammany Parish to the Levee Board and other stakeholders.

Below are comments pertaining to the St. Tammany Parish, Louisiana Draft Feasibility Study:

Non- Structural Plan:

1) Over 50% of the estimated 4 billion dollars needed to fund the project will be spent on elevating and flood proofing structures. Page 130 of the main report states that 8,498 structures would be included in the non- structural mitigation process. Of these about 6,6,00 home will be elevated, and about 1900 non- residential structures will receive some form of floodproofing. The study details the eligibility and application process but does not address the following issues.

   a) What is the estimated timeline in which the Corps expects to complete the elevation and flood proofing portion of the project?
   b) Can the Corps provide documentation on the implementation for nonstructural projects due to such a large number of structures being considered?
   c) How does the Corps plan to adjust for additional structures missed in the original cost estimates and cost benefit calculations? Example: Current surveys show that the Corps' estimate of only 400 homes in the Eden Isles area slated to be elevated is far too low.
   d) Elevating homes in this community will likely not be as cost effective as the study indicates. Actual estimates from the local construction industry can vary from $225,000 to $475,000. Also, when compared to other Corps managed elevation projects in this area the process will take decades to complete. This will leave eligible homes and businesses in a flood prone environment for many years to come.
   e) Many of the homes that will need to be elevated are some of the oldest homes in the areas. What is the Corps plan if the home's value is less than the cost to elevate?
   f) What plan does the Corps have to address homes that are in the 50-year flood plain but do not meet the current eligibility standards? Homes that are slightly above the eligibility standard will still be at the same risk level as eligible structures when considering all the storm conditions and risk factors.
   g) On page 23, appendix F it states that all agreements for elevation or flood proofing will be completed between the landowner and the NFS. Because this is a voluntary measure, what procedure does the Corps have in place to address the involvement of mortgage companies and other entities that have a vested interest in the structure in conjunction with the homeowners? Also, what legal aspects is the Corps aware of when the different entities do not agree with the Corps plan?

Structural Protection Plan:

1) Approximately 16 miles of levee systems are being proposed in the Draft Feasibility Study TPS. There are grave concerns about the additional surge effects to communities which will not be within the levee-protected areas. The Corps states that modeling will take place in the pre-construction stage of the study. There is no explanation as to why the Corps plans to wait until that point to model the levees and their effects on communities outside the levee system. This is a serious concern because the cost of protection for these areas, if warranted, will not be included in the cost/benefit calculation.

   a) The West Slidell levee alignment will extend from the Norfolk Southern railroad tracks in Slidell to the northwestern side of Lacombe. The draft Feasibility Study must address additional flooding that may occur to areas west of levee system which are slated to receive no structural flood protection.

b) Communities in the vicinity of Eden Isles will not be protected by existing levee systems (Oak Harbor and Lakeshore Estates) or the levee systems proposed as part of the Corps TPS. Eden Isles is left out of these levee systems and may be vulnerable to more severe consequential and induced storm surge. The Corps is requested to address fully any consequential and induced surge threat to the Eden Isles community. The additional surge would increase flood damage for the Eden Isles community. The Corps states that modeling will take place in the pre-construction stage of the study.

c) Currently, there is a concern with the levee alignment located in the south Slidell alignment extending from the Lakeshore Village levee to the Kingspoint Levee system. The USACE structural alignment presented in the Feasibility Study is the old Parish levee alignment. This area is extremely vulnerable to tropical storm surge impacts and requires comprehensive protection. For example, during hurricane Katrina the storm surge exceeded 19 feet and devastated the Old Spanish Trail area. This segment is critical to protecting Old Spanish Trail, Slidell and Interstate 10. Moving the alignment further east towards the W-14 canal would provide a better comprehensive protection system for the residences between the Lakeshore Village Levee and the Kingspoint Levee. The new alignment would protect an additional 37 residences, 1 commercial business, along with the associated neighborhood roadway infrastructure. The alignment would provide a gate and pump station for storm surge protection in Pirates Harbor Canal. Any additional costs using the new alignment is out weighted by the benefits it would create. Protection of this area is critical for large and small events.

d) The proposed levee alignment along the South Levee system from KIngspoint and Hwy. 190 to Manzella Dr. will follow the CLECO powerline right of way. After reviewing several alternatives, the Levee Board favors an all-inclusive levee alignment towards the Military Rd. area. The Levee Board favored alignment would include protection for all residents on both sides of Military Rd.

Data used by the Corps in the evaluation process:

1) The data used in some of the evaluation process may need to be updated to get true cost benefit ratio. Recent surveys of some homes in the communities earmarked for elevations does not align with home elevations derived from the National Structure Inventory. There is no indication as to how current or accurate the National Structure Inventory is.

a) In St. Tammany Parish, particularly the community of Eden Isles, homes elevations may be much lower than historical elevations state. The actual number of homes meeting the Corps elevation criteria may be much more than the 400 stated. This will drastically change the cost benefit ratio for this community if the increase in the number of homes prove to be correct. The Corps states that surveys will take place in the pre-construction stage of the study. This may be too late for the Corps to change the direction or increase the cost benefit ratio they have approved for these areas.

b) In Appendix E Hydrology & Hydraulics on page 3, it is noted that the results created from the 2017 the CPRA ADCIRC model was utilized by the Corps of Engineers and created no models runs for this study. The Corps used this data in part to complete statistical analysis on results generated for current and future conditions from a suite of storm simulations that were previously run for the study area.

c) The study does not mention the 2018 "Evaluation of Storm Surge in Areas Outside the Greater New Orleans Hurricane and Storm Damage Risk Reduction System" (HSDRRS) which was created by the Corps. Although the HSDRRS evaluation was created for a different reason, the results were significant to examining surge issues. In 2020 the Corps created appendix D for the HSDRRS evaluation to determine what effects the HSDRRS system had on Eden Isles and other communities in southern St. Tammany. The end results of the evaluation revealed that the HSDRRS does contribute additional surge conditions in those areas. The amount of surge increase was relative to the storm conditions. It is reasonable to consider that this additional surge will be compounded by the increase in sea level rise and construction of levee systems near the Eden Isles community. There is no mention in the study about this and if it was part of the analysis.

d) In the Draft St. Tammany Feasibility Study the Corps states that from now to 2023 there will be an additional 0.4 to 0.5 increase in sea level rise affecting the St. Tammany shoreline. Appendix E, Section 4.4.2.2 indicates that relative sea level rise was incorporated in the downstream modeling conditions. In the study there is no official elevation for a 50-year floodplain in the Eden Isles area. What does the Corps of Engineers consider to be the current official 50-year floodplain elevation in the Eden Isles area? Was the 0.5 predicted sea level rise included in that elevation by 2032?

e) In the Draft Feasibility Study the Corps has projected a completion date for the project of 2032. This also is the timeframe the Corps plans to start the 50-year period analysis to the year 2082. Structures that are protected by a 100-year levee system or structures being elevated to the 100-year flood plain will protected during the analysis period through the year 2082. Thousands of homes and businesses that do not currently meet the eligibility standards for elevation or that are behind a levee system will still be venerable to projected increased surge from now to 2082. FEMA has indicated that BFE will continue to rise into the future. Using the Corps predictions many homes will be at or below BFE by the year 2042. At that point there will need to be some form of protection which will probably cost additional billions of dollars when projected over a 50-year period analysis. It seems more cost effective to consider adding those homes to the eligibility group now instead of delaying to a future project.

Conclusion:

It is not the intention of the St. Tammany Levee, Drainage and Conservation District to criticize the Corps of Engineers. It is quite visible that the Corps has placed a lot of time and effort in this study with the intent to create flood protection for the residents of St. Tammany. The Levee Board efforts in this document is to point out concerns that arose during public meetings when creating the Master Plan for flood protection in St. Tammany Parish. The Levee Board realizes that the Draft Feasibility study is in complete control of the Corps of Engineers and is making no attempt to direct the study. However, the Levee Board would be remiss in their duties if they did not point out these concerns.

St. Tammany Levee, Drainage and Conservation District Board Members

Cody A. Bruhl

Cody A. Bruhl
Secretary