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U.S. Army Corps of Engineers - New Orleans District
% Amy Dixon
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Subject: St. Tammany Parish Feasibility Study

Dear Ms. Amy Dixon,
I am writing to express my opposition to the U.S. Army Corps of Engineers, New Orleans District's (CEMVN) recently released *Revised Draft Integrated Feasibility Report and Environmental Impact Statement* (RDIFR-EIS) for the St. Tammany Parish Louisiana, Feasibility Study. I am gravely concerned that the project scope and plan formulation was based on a vast number of assumptions and further manipulated through erroneous calculations utilizing outdated, incomplete, and inaccurate data. At best, the CEMVN failed to exercise methodological due diligence throughout the project. However, the omissions and errors are significant enough that they bring into question the CEMVN's true intent.

Appendix B - Plan Formulation identifies the project scope through identified problems, opportunities, and related objectives. Table B:1-1. St. Tammany Parish, Louisiana Feasibility Study, Problems, Opportunities, and Objectives cites specific evidence for the defined objectives, including: "3500 residential structures are on the FEMA repetitive and severe repetitive loss list." Clearly, these structures should be prioritized in any plan set forth. However, there is no data presented to indicate the Optimized Tentatively Selected Plan (TSP) will address this stated problem. Has the CEMVN analyzed which of these residences will be protected through the structural and/or non structural plans? Of those residences that will only be eligible for non structural measures, it appears doubtful many will meet all of the eligibility criteria (i.e. future damage risk, reduction in damage costs, cost to elevate related to value of home, physical inspection, floodplain elevation level) as set forth in the Optimized TSP. How will the proposed cost to benefit ratio be affected when homes do not meet criteria for elevation and are left unprotected? It is critical to understand this relationship before seeking funding, as a reduction in cost to benefit ratios will decrease the impact and efficacy of the Optimized TSP.

Another identified problem in Table B:1-1 is stated:

> "Critical infrastructure throughout the region including the I-10, I-12, and I-59 transportation system and evacuation routes, Government facilities, hospitals, and schools is expected to become more at risk of damage from potential floods."

The Optimized TSP fails to address most of this stated problem. With the exception of the City of Slidell government offices and a small portion of I-10 contained within the proposed levee, there is no firm evidence provided to indicate protection of key infrastructure and resources throughout the parish. I assert that the area of Eastern Slidell outside of the proposed levee will have more floodwater pushed into the area, thus CAUSING an INCREASED risk for flooding, INCREASED risk of damage to structures, INCREASED loss of life, and INCREASED disruption in services, including four schools my children attend, the closest and largest hospital and medical complex in Slidell, and several large churches that serve the greater community through welfare programs and disaster recovery (e.g. The Church of Jesus Christ of Latter-Day Saints, located just off Military Road). Further linking the levee design to I-10 as proposed will CAUSE and INCREASE in transportation and evacuation interruptions if the levee is breached.

Yet another problem statement listed in Table B:1-1 is that there is an "increasing risk to people from catastrophic flooding events". Again, the Optimized TSP does not address this problem. Appendix D - Annex 4 - Preliminary Life Safety Risk Assessment, Section 8.1 includes a matrix summarizing the life safety risk analysis. The proposed levee included in the Optimized TSP is listed in the Section 8.1 matrix to INCREASE annual life loss and INCREASE incremental risk, even with the unfortunate stated omission of unavailable inundation map data.

Appendix B - Plan Formulation also includes Figure B:1-3 Types of Measures Evaluated Under the St. Tammany Feasibility Study. This figure uses a scoring methodology to determine which proposed actions met the project objectives and would be kept in the plan for further review. No data is cited as a basis for these scores, therefore the scoring methodology can't be assessed for appropriateness, nor can it be replicated. Since the generated scores determined if actions were kept as feasible solutions or removed from consideration, **the entire validity of the plan formulation is highly suspect.**

Appendix D – Annex 4 - Preliminary Life Safety Risk Assessment illustrates weaknesses and ethically irresponsible approaches in the methodology. Concerning statements (emphasis added) include:

> Section 1.0 - "The *life safety assessment is qualitative* and prepared prior to completion of the engineering appendix and *without consequence modeling*." (No sources or methodology for qualitative data collection are noted.)
>
> Section 2.5 - "The South Slidell is a combination of levees and pump stations, which are *proposed to reduce risk of storm surge flooding*." (Data is not cited for this assumption of reduced risk.)
>
> Section 3.0 - "*Limited modeling has been done to inform the potential benefits and consequences* of the flood reduction alternatives." (Data on benefits and consequences needs to be accurately and thoroughly modeled to inform appropriate decision-making.)

Section 4.3 - "*Sea level rise and subsidence considerations must be investigated* for both design and the future condition risk assessment." (Sea level rise data should be considered critical in appropriate flood mitigation plan formation.)

Section 8.2 - "*Significant uncertainties and unknowns are incorporated into this assessment*. The engineering unknowns, particularly the lack of geotechnical data *resulting in major assumption in the foundation design, result in uncertainty with the potential long-term performance of the levees and floodwalls* as currently presented. In addition, no life consequence data was available to the team for the assessment. *Assumptions were made about the performance and the potential consequences.*" (It is grossly negligent to repeatedly justify the use of assumptions instead of data where data is obtainable.)

I am concerned about the overall cost to benefit ratio of the Optimized TSP. Per the study overview, "Hurricane Katrina damaged over 48,000 residential structures causing 1.45 billion in damages." In today's dollars, this amounts to 2.3 billion in damages, approximately half of the proposed project cost. Hurricane Katrina was an anomaly. Since a significant number of St. Tammany homes will not be protected by the levee and can not eligible to be raised without repairs or modifications to meet code (per stipulations outlined in Appendix H - Nonstructural Implementation Plan), it can be assumed that any storm impacting St. Tammany Parish will still result in substantial damages and repair costs for these omitted structures in addition to the excessive cost of the Optimized TSP. *It is possible that the area would need to experience 3 storms causing similar damages to Hurricane Katrina before recouping the cost of the project.* Without data regarding how many homes will qualify for elevation, it is impossible to accurately determine a cost to benefit ratio. While a reduction in homes eligible for elevation may improve projected costs, it will definitely reduce the beneficial impacts of the Optimized TSP. How these reductions will affect the stated cost to benefit ratio is unknown.

Appendix D - Annex 5 - Cost Engineering cites that cost data was "supplemented with estimating information from…quotes, bid data, and Architect-Engineer estimates" and further states "historical Government and Commercial bid data" and "other available historical cost data sources" were utilized. This supplementation is problematic from a modeling perspective in that *no details are given of the ratio of supplemented estimated data to the actual cost data used, nor is there any accounting for the relevance or validity of the collected quotes, bids, and estimates* used in representing project costs for St. Tammany Parish. Therefore, **the resulting cost modeling may be invalid**.

The discussion in Appendix D - Annex 5 also states:

> "The cost of each structure was then escalated to 4th Quarter 2020 pricing to develop new costs for all structures".

Is there a reason the costs were not updated to reflect inflation before the *Revised Draft Integrated Feasibility Report and Environmental Impact Statement* (RDIFR-EIS) dated July 2023 was released to the public? The Bureau of Labor Statistics CPI Inflation Calculator shows a 17% inflation rate from December 2020 to July 2023

(https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=1.00&year1=202012&year2=202307). Excluding such significant inflation greatly skews any calculations.

The Executive Summary, Non-structural Elevations and Flood Proofing states "the cost to raise homes cannot exceed the anticipated damages caused by flood water". The vast majority of homes in Eastern Slidell that will be outside of the proposed levee are large homes that will be expensive to raise. This may lead to an excessive number of homes in Eastern Slidell being eliminated from elevation consideration, **greatly reducing the projected positive impacts of the Nonstructural Plan**. Other factors that will reduce participation and actual benefit derived from the Optimized TSP Nonstructural Plan include the *incredible financial burden this plan places on individual homeowners*, including bringing homes up to current codes (my neighbors have received estimates totaling over $200,000 to update their homes for elevating), projected loss of property use and displacement costs during raising (45 days or longer), unidentified/unforeseen issues uncovered during the elevation process (e.g. asbestos, termite damage, wood rot, mold, roof leaks, structural damage, etc), loss of aesthetic value and marketability, etc. (See Appendix H - Section 3.)

Further challenging homeowner participation is the proposed timeline of initial eligibility and secondary eligibility. At this time, CEMVN has not collected individual data on residences that will be protected under the Optimized TSP Nonstructural Plan. This will be done after funding is received. I contend that this is too late, as part of eligibility requirements set forth are dependent on the cost to elevate not exceeding the determined value of the residence (Appendix H, Section 3). The actual market values of residences in Eastern Slidell will DECREASE as soon as the Optimized TSP is funded. This DECREASED market value will be used to assess a further depreciated value of homes. The proposed formula for valuation of residences is problematic in that it is, again, based upon an assumption that home values in St. Tammany Parish have depreciated over 20 years. This assertion is not based on fact, and data that supports appreciating home values is easily obtainable. Choosing to omit this fact is negligent at best and may prove critically harmful to homeowners as well as the success of this plan. By using already devalued property amounts in formulas that further reduce the home value, CEMVN is effectively reducing the number of homes that will qualify for elevation per the set criteria that costs to elevate can not exceed the determined value of the property. In addition, CEMVN has stated that no other alternatives will be offered to homeowners outside of the limited areas protected by the Structural Plan. *What will happen to any unclaimed/ unused nonstructural funds?* I and others contend that the majority of unprotected homes will fail to meet criteria for raising, due to stipulations and processes set forth by CEMVN. I highly recommend that a sampling of residences representative of the actual homes in each zone be assessed by the elevation eligibility criteria to model pass/fail ratios BEFORE this plan is funded.

Homeowner participation in the nonstructural plan is voluntary and buy in will be challenging due to the financial burden this plan places on the homeowner. Additionally, **the community lacks trust in CEMVN and government entities, both from experiences with previous project failures and known corruption** (e.g. Hurricane Katrina levee failures and community

responses, St. Tammany Utilities mismanagement). Improvements in transparency, accountability, and stakeholder involvement are greatly needed moving forward for the non structural plan to have meaningful impact. For example, I recently attended the Slidell Public Meeting regarding the St. Tammany Parish Feasibility Study on 8-15-2023 after a neighbor invited me to attend. This was the first information I received about the project in 3 years of living here. The meeting was not advertised directly to the community by CEMVN or the local and state governments. Is there a reason for this communication failure?

I also must request that the management and maintenance of any structural plan be given to an entity different from St. Tammany Parish. They have failed to properly maintain and manage pumps, retention pond levels, and drainage canals throughout the parish on multiple occasions within just the past 3 years. They also struggle to maintain the ditches in the parish. These failures have caused notable flooding events in Eastern Slidell and other areas. Should you wish to receive more information on these failures, I would be happy to provide details.

Lastly, **in addition to CEMVN's extensive use of assumptions throughout the approach and development of the TSP, it appears CEMVN is taking liberties in their jurisdiction**. Per the USACE International Boundary Map and Address Locator (https://usace.maps.arcgis.com/apps/webappviewer/index.html?id=7344e62432694199af7790aa47a32fdd), my home and others in Eastern Slidell are not within the CEMVN district and instead reside within the U.S. Army Corps of Engineers - Vicksburg, MS District. Through a phone conversation with the Vicksburg District Office, I was informed they are unaware of this proposal and had not been invited to participate at any level. Can you give reason for the exclusion of the USACE - Vicksburg District Office in development of a project directly impacting homes within their jurisdiction? Furthermore, will homes outside of the USACE - New Orleans District (CEMVN) be eligible to receive any funds as part of the Optimized TSP Nonstructural home elevations?

I urge you to review the methodological weaknesses I have discussed and revisit the planning and decision-making process. A proposal for 4+ billion dollars should be developed from facts, utilizing thorough data reviews and robust modeling BEFORE funding is obtained.

Sincerely,

Jessica F. Barker, Ph.D.