



State of Louisiana

JEFF LANDRY
GOVERNOR

March 7, 2025

The Honorable Cullen A. Jones, P.E., P.M.P.
Colonel
Department of the Army
U.S. Army Corps of Engineers
New Orleans District
7400 Leake Ave.
New Orleans, LA 70118-3651

RE: Permit No. MVN-2012-02806-EOO Request for USACE Evaluation - Transmission of Numerical Modeling for the 90% Phase of Engineering and Design Report dated June 3, 2022, prepared by AECOM Technological Services and FTN Associates Ltd.

Dear Colonel Jones:

Thank you to you and your staff for taking the time to meet with me and members of our administration on February 26, 2025, to discuss concerns with the Mid-Barataria Sediment Diversion ("MBSD"). As discussed at that meeting, when Governor Jeff Landry took office in January of 2024, it became clear that a last minute out the door approval to proceed in construction of the MBSD was prematurely made by the prior administration. Lawsuits remain pending in both state and federal court concerning the MBSD, and, due to the complexities and unknowns surrounding the project, we have spent the last year studying the matter. This review remains ongoing due to the volume of documents related to the MBSD. So far, we have discovered that local permits were not obtained, mitigation is not complete, and engineering on the salt water wedge and impact to the MBSD was not performed prior to the start of construction, and a federal lawsuit is open challenging the FEIS on other grounds.

We also came across a report dated June 3, 2022 called FTN Mid-Barataria Sediment Diversion (BA-0153) Numerical Hydraulic Modeling for the 90% Phase Engineering and Design, prepared by AECOM Technical Services ("AECOM") and their sub-contractor FTN Associates Ltd., now part of Olsson ("FTN") that may be of interest to the Corps. While there appeared to be discussions with Mark Wingate, former Deputy District Engineer for Programs and Project Management from the U.S. Army Corps of Engineers ("USACE"), about this FTN modeling, the report does not appear to have been disclosed to the public nor considered by all necessary persons within the Corps. The Federal regulations for Environmental Impact Statements have requirements for furnishing all relevant information and supplemental information. *See* 42 USC 4332;

Ondrusek v. USACE, 123 F. 4th 720 (5th Cir – 2/13/24); 40 CFR §§ 1502.9, 1502.21, and 1506.5; 33 CFR §§ 320.4, 325.3, and 337.1. Therefore, this letter is being sent to you, along with the report, so that you can evaluate what impact the information would have on the permits issued by the Corp. relative to the MBSD. Your decision is important as we evaluate the MBSD, and we appreciate your prompt attention to this matter. In addition to today's transmission of the report, CPRA provided a link with the exhibits to you on February 25, 2025, and two binders to USACE legal staff on February 26, 2025, that included a copy of the FTN June 3, 2022 modeling report, the Sensitivity engineering draft from October 2022, the USACE relevant EM and HEC manual, emails, and FTN summary of key differences between its modeling and the Water Institute's modeling.

CPRA, USACE, and GEC, Inc., ("GEC") as a third party contractor, entered in memorandum of understanding on February 15, 2017, designating USACE as lead agency for Environmental Impact Statement (EIS). GEC was responsible to draft the EIS. AECOM was responsible for design, mitigation, OMRR plan, etc. Scoping was done for modeling and contracts. AECOM subcontracted FTN to perform its numerical modeling. Specifically, again we are providing a report dated June 3, 2022, prepared by AECOM and their sub-contractor FTN, titled "Numerical Modeling for the 90% Phase of Engineering and Design." This report is named the Mid Barataria Sediment Diversion-BA 0153-Numerical Modeling for the 90% Phase of Engineering and Design. This report was furnished to AECOM and CPRA by FTN. Prior FTN modeling was performed at 30% and 60%. As we understand it, this testing was used by AECOM in writing its Design Documentation Report ("DDR"). The 60% phase DDR report is attached to the FEIS as Appendix F. Our review indicates there may have been changes in modeling between 60% and 90% because of design changes in 2021. On July 19, 2022, 90% deliverables were sent by AECOM to the USACE. However, it appears that the 90% FTN numerical, draft 2, was a redacted modeling report from June 3, 2022. On December 23, 2022, the day after the USACE issued its permit, FTN generated draft 3, 95% Numerical Modeling Report (which we believe contained minimal changes from the 90% prior report). By April of 2023, the final AECOM 100% design and design report with the final FTN modeling report was transmitted to USACE.

The USACE should have a record of all documents submitted by name and date – whether in the EIS records for decision or outside the records of decision. It appears that CPRA had informal conversations with Mr. Mark Wingate and Mr. Chris Doley of the National Oceanic and Atmospheric Administration/LATIG Federal Trustee, concerning the numeric modeling differences between the Water Institute and FTN's 90% report dated June 3, 2022. However, the report was not made part of the final Environmental Impact Statement ("FEIS"), it was not part of CPRA's submissions prior to the issuance of the record of decision and permit. More importantly, to our knowledge, it was never disclosed to the public. Based upon our research, this June report was redacted/edited, and the redacted information was included in a new draft report that was started and dated October 5, 2022 (there are subsequent versions in 2023). As we understand it, this report has been classified as a Sensitivity report, and it is designated as an in-house report by CPRA as "Mid Barataria Sediment Diversion-(BA—0153)-Numerical Hydraulic Modeling for the

Operations, Management and Sensitivity." In accordance with EM-1110-2-1619 and HEC-RAS user manual, for modeling and sensitivity reporting, it appears all modeling data must be reported.

We have read the MOU, regulations, and permits issued, and we believe we have a duty to disclose this FTN modeling. Your web site contains the following for the MBSD:

A Final Environmental Impact Statement (EIS) was prepared to disclose and analyze all significant environmental impacts of the Proposed Action as required under the National Environmental Policy Act (NEPA) in accordance with the Council on Environmental Quality's (CEQ) regulations found in 40 CFR Parts 1500-1508. This EIS provides the information needed for the Public Interest Review requirements of 33 CFR Parts 320-332 including 33 CFR Part 325, Appendix B, 33 U.S.C. 408 and 40 CFR Part 230 (Section 404(b)(1) Guidelines). The Final EIS will provide information required for an informed decision on the DA permit application and Section 408 permission request.

<https://www.mvn.usace.army.mil/Missions/Regulatory/Permits/Mid-Barataria-Sediment-Diversion-EIS/>

Nicole Forsyth with GEC advised us that GEC did not receive any 90% AECOM/FTN numerical modeling reports or related files used for their EIS transmission in August 2022. The USACE either on its own and/or with public input, may have revisited its analysis, record of decision, and permitting based on the FTN modeling. Therefore, our administration does not feel comfortable with not disclosing the complete modeling.

The modeling in this report matters because throughout the MBSD Environmental Impact Statement ("EIS") process, the CPRA environmental team, USACE, and the LATIG relied on the Delft3D basin wide model ("Delft BW") developed by The Water Institute of the Gulf ("TWI") to project the likely potential impacts of the MBSD on land building and water quality parameters in the Barataria basin, including salinity. A Modeling Working Group ("MWG"), made up of representatives from USACE (including the Engineering Research and Development Center ("ERDC")), GEC Inc. (the third party contractor responsible for preparing the MBSD EIS), and the LATIG, reviewed and affirmed the inputs, parameters, and outputs for the Delft BW model over a year's long process that culminated in the development of a modeling memo that confirms all "concurred that the Delft3D Basin-wide production runs and outputs were adequate and sufficient to inform the MBSD EIS impacts analysis of the alternatives." See MBSD EIS Summary of Delft3D Model Run Approach, Status as of 4/30/2020.

However, as we advised, we believe the FTN 90% Numerical Modeling for Design and Operations became a necessity and was requested by AECOM because of design changes (4 gates to 3 gates) and the conveyance channel changed from a 4h:1v to 7h:1v. New modeling needed to be done and completed by summer of 2022. AECOM questioned if CPRA should provide the EIS Team the additional information for inclusion into the EIS's final report because of the changes. (See April 12, 2021 – AECOM Memorandum – 60% and 90% Phase E&D Design Analysis- Comments and Caveats)

FTN developed additional, more specific modeling to assist in engineering and designing particular components of the diversion, including the intake, the channel, and the outfall. This effort resulted in a series of models that FTN also used to project certain basin side impacts.

FTN's modeling was independently technically reviewed by Royal HaskoningDHV. We recently interviewed FTN engineer Ranjit Jadhav and AECOM project manager Bruce Lelong concerning these issues.

Results of the Delft BW model and the FTN models are inconsistent with each other. Examples are discussed below as well as in the attached "Summary of Key Differences," an additional document we located in our review of the MBSD:

- **Land building.** The Delft BW model projected a net increase of 13,400 acres of land over the Future Without Project scenario at year 50. The FTN models project land building at year 50 in the 4,700 – 8,000 acre range, depending on the operational scenario. In general, the FTN models predict that land will be built faster, and that the land will then be lost faster than in the Delft BW model.
- **Salinity.** The Delft BW model generally projected lower salinities (more freshwater inflow) than the FTN models.
- **Dredging/flushing.** The FTN models predict a need for dredging or flushing of the diversion channel to address the effects of sediment deposition in the channel during low base flow periods, and significant dredging (upwards of several hundred million cubic yards in the later years of diversion operations) in the outfall area to maintain land building capacity.² The Delft BW model does not include dredging or flushing as a modeled parameter or output, although the MBSD EIS includes some discussion of the effects of maintenance dredging in the diversion complex and the immediate outfall area.
- **Base Flow.** One of the reasons for the above differences is that the Delft BW model assumes a constant baseflow of 5,000 cfs any time the Mississippi River flow is below 450,000 cfs. The FTN model, by contrast, use a variable base flow of 0 – 5,000 cfs that is based on the projected head differential between the River and the basin.

These differing results raise legal, timing, and reputational concerns. This FTN modeling existed before the record of decision was closed and before the permit was issued. Because the results of the FTN models were not provided to the USACE, they were not included in the Administrative Record for the permit or funding decisions. This not only prevents the USACE technical and legal to make determinations, but also other stakeholders and the Public. USACE may have revisited its analysis based on the new information in the FTN models. Our concern is that the law allows FEIS challenges during projects that take years. The proof is not onerous. The plaintiff only needs to prove "a risk that serious environmental impacts will be overlooked." Results are not the issue – risk is the issue - See Ondrusek page 752. You were provided FTN's chart of key modeling differences – some that involve assumptions that we believe do not exist, salinity issues, backflow issues, dredging issues, etc.

With a three billion dollar project of this size, with recognized uncertainties, and impacts to communities of interest, we are obligated to disclose the FTN modeling. As we decide how to

proceed with the MBSD, please let us know if the 90%, 95%, and 100% complete and/or redacted FTN numerical modeling reports were received by USACE in 2022 and 2023, if it needed to be submitted to USACE, GEC, and the public for the EIS consideration, and if it will impact the USACE permit, technically and/or legally.

Sincerely,



Gordon Dove
Executive Assistant to the Governor for Coastal Activities

Encl.: June 3, 2022 – MBSD – (BA-0153) Numerical Modeling 90% Phase of Engineering and Design
FTN - Summary of Key Differences

cc: Governor Jeff Landry (w/o encl)
Angelique Freel, Executive Counsel for Gov. Jeff Landry (w/o encl)
Glenn Ledet, CPRA, Executive Director (w/o encl)
Julius P. Hebert, attorney for CPRA (w/o encl)
TIG – Chairman Chris Dooley (w/o encl)
NFWF – Jay Jensen (w/o encl)
David Dyer – USACE Attorney (w/o encl)
Treva Grandpre-Cadres – USACE Attorney (w/o encl)

Summary of Key Differences: FTNOMLV-CONSOL and WIBW

Topic	MBSD FTNOM-LV-CONSOL (90% E&D)	WIBW (PRAV3)
Diversion Discharge	Time series of daily diversion discharge , which depends on daily head difference between the MR and the basin . Depends on three parameters: MR discharge, MR stage and basin stage. Obtained from FTNOMBA modeling with both the basin and the MR.	Time series of daily diversion discharge , does not depend on daily head difference between the MR and the basin . Depends only on one parameter: MR discharge Obtained from previous WIOMBA modeling as a best fit line.
Discharge Rating Validity through time	Updated every 5 yrs over 50 yrs. Takes into account change in RSLR, land-building induced backwater effects, vegetation resistance and consolidation due to deposited material.	Held constant through 50 yrs. Does not take into account RSLR, land-building effects, vegetation resistance or consolidation effects.
Dredging Effects	Dredging (every 5 years) is implemented to increase capacity whenever it falls below 75,000 cfs at 1,000,000 cfs MR flow. Therefore, dredging effects are reflected in diversion discharge time series that is updated every 5 years . Dredging improves capacity as RSLR and land-building increases which is reflected in the subsequent 5 years.	No dredging implemented in the basin so no feedback to the rating curve and discharge time series.
Base Flow, below MR 450,000 cfs (non-operational period)	Capped to maximum of 5,000 cfs daily but can be less than 5,000 cfs depending on the head availability. Base flow availability reduces through time due to RSLR and land-building effects and reflected in modeling.	Held constant at 5,000 cfs daily throughout the non-operational period.
Reverse Flow and No-flow periods below MR 450,000 cfs (non-operational period)	Reverse flow not allowed to occur. When reverse flow conditions exist, base flow is set to 0 cfs; all gates closed.	Does not consider reverse flow situations. Assumes constant 5,000 cfs daily throughout the non-operational period even when reverse flow conditions exists.
RSLR Effects in the basin	Considered in the modeled diversion discharge as this is a head driven model.	Not considered in the diversion discharge rating curve.
RSLR Effects in the MR	Considered in the model at this time.	Not considered in the model