Tulane University

Tulane Environmental Law Clinic

January 26, 2009

Via U.S. Mail, Fax (504)862-2088 and e-mail to richard.e.boe@usace.army.mil.
Mr. Richard Boe
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

Re: **Comments on the Draft Supplemental Environmental Impact Statement for the Inner Harbor Navigation Canal Lock Replacement Project on behalf of Holy Cross Neighborhood Association, Gulf Restoration Network and Louisiana Environmental Action Network.**

Dear Mr. Boe:

On behalf of the Holy Cross Neighborhood Association,[1] the Gulf Restoration Network,[2] and the Louisiana Environmental Action Network,[3] please consider the following comments on the Draft Supplemental Environmental Impact Statement ("DSEIS") for the Inner Harbor Navigation Canal Lock Replacement Project. For the reasons set forth below, Holy Cross, Gulf Restoration Network, and Louisiana Environmental Action Network oppose the lock replacement project and urge the Corps to select the "No Action" alternative and recommend that Congress de-authorize the project. Holy Cross, Gulf Restoration Network, and Louisiana Environmental Action Network request written notification if the Corps issues a Final

[1] The Holy Cross Neighborhood Association is a non-profit corporation composed of residents of the Holy Cross neighborhood. Holy Cross Neighborhood Association is dedicated to making their community the best place in the city to live and raise a family.
[2] The Gulf Restoration Network is a non-profit corporation committed to uniting and empowering people to protect and restore the valuable resources of the Gulf of Mexico. The Gulf Restoration Network has members in the five Gulf States of Texas, Louisiana, Mississippi, Alabama and Florida.
[3] Louisiana Environmental Action Network ("LEAN") is a non-profit corporation organized under the laws of the State of Louisiana. LEAN serves as an umbrella organization for environmental and citizen groups. LEAN's purpose is to preserve and protect the state's land, air, water, and other natural resources, and to protect its members and other residents of the state from the threats of pollution. LEAN has members statewide, including members who live, work, or recreate in the project area.

Supplemental Environmental Impact Statement or Record of Decision and reserve the right to rely on all public comments submitted.

BACKGROUND

The existing Inner Harbor Navigation Canal, locally known as the Industrial Canal, was constructed in 1923 between two historic neighborhoods, Holy Cross and Bywater. The Industrial Canal connects the Gulf Intercoastal Waterway and the Mississippi River-Gulf Outlet with the Mississippi River and Lake Pontchartrain in southeast Louisiana.

The 1956 Rivers and Harbors Act authorized the construction of a new lock and channel when "economically justified by obsolescence of the existing industrial canal lock, or by increased traffic, replacement of the exiting lock or an additional lock with suitable connections…"[4] The Corps issued a draft environmental impact statement about a new lock in 1983, and issued the Final Environmental Impact Statement in 1997. A year later, the Corps issued a Record of Decision, committing to go forward with the project.

A. The Corps' 1997 Final Environmental Impact Statement Failed to take a Hard Look at the Environmental Impacts of the Lock Replacement Project.

Holy Cross Neighborhood Association, Gulf Restoration Network and Louisiana Environmental Action Network sued the Corps over the 1997 Final Environmental Impact Statement because the Corps failed to comply with the National Environmental Policy Act's ("NEPA"), requirement that the Corps take a hard look at the environmental impacts of the lock replacement project. Some of the shortcomings of the 1997 Environmental Impact Statement included that the Corps:

1) failed to determine scope (nature and extent) of contamination or canal sediments and soils that are to be dredged;

2) failed to assess risks to public health, welfare, and the environment of dredging, stirring up, and disposing of contaminated sediments and soils;

3) failed to consider alternatives for safely dredging and managing contaminated soils;

4) failed to identify standards to govern sediment disposal;

5) failed to identify standards to govern discharges from disposal facility;

[4] Congress amended and supplemented the authorization for the lock modernization project several times. *See* Water Resources Development Act of 1976, Pub. L No. 94-587, § 186, 90 Stat. 2917, 2941-41; Water Resources Development Act of 1986, Pub. L. No. 99-662, § 844, 100 Stat. 4082, 4177; Water Resources Development Act of 1996, Pub. L. No. 104-303, § 326, 110 Stat. 3658, 3717.

6) failed to assess short term and long-term impacts of constructing an engineered disposal facility in a sensitive ecosystem;

7) failed to analyze how long engineered disposal facility will last; and

8) failed to analyze what types of storm events the facility can/will withstand.

In 2007, the United States District Court for the Eastern District of Louisiana enjoined the Corps from continuing with the project until it complied with NEPA. Specifically, the Court directed the Corps to take a "'hard look' at the environmental impacts and consequences of dredging and disposing…of contaminated sediment…in light of recent catastrophic events [like Hurricane Katrina]." *Holy Cross v. U.S. Army Corps of Engineers*, 455 F.Supp.2d 532, 540 (E.D. La 2006). The Court found the Corps failed to consider the "reasonable dredging and disposal alternatives that the Corps has recently adopted for maintenance dredging of the same area." Id. Those alternatives include using an "environmental bucket clamshell dredge designed to minimize re-suspension of sediment during the dredging operation" and disposing the sediments in a Type I landfill. *See* Public Notice of Proposed Maintenance Dredging of the Gulf Intracoastal Waterway (GIWW), Inner Harbor Navigation Canal, New Orleans, LA, dated May 16, 2006.

B. The Corps Issued a Draft Supplemental Environmental Impact Statement in an Attempt to Comply with the Court's Order.

In October 2008, the Corps issued its Draft Supplemental Environmental Impact Statement recommending the Float-in-Place lock replacement plan. The plan would replace the 640 feet long, 75 feet wide and 31.5 feet deep lock with a new 1,200-foot long, 110 foot wide and 36-foot deep lock. The Float-in-Place plan requires construction at two separate sites, a graving site and new lock site. After construction of the lock module is completed at the graving site, the modules will be floated to the new lock location.

I. THE CORPS' SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT IS INSUFFICIENT TO COMPLY WITH THE COURT'S RULING.

The Corps cannot comply with the court's order that the Corps comply with NEPA by merely supplementing its prior insufficient 1997 Final Environmental Impact Statement. Federal regulations specify that supplemental environmental impact statements are appropriate where "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c). Here, the court found that the Corps "failed to take a 'hard look' at the environmental impacts and consequences of dredging and disposing of the canal's contaminated sediment" and the post-Katrina evidence submitted "merely shed light on this fact." *See Holy Cross v. U.S. Army Corps of Engineers,* 455 F.Supp.2d 532, 540 (E.D. La 2006). In fact, the court declined to address claims raised pre-Katrina that the Corps needed to prepare a supplemental environmental impact statement. *See id.* at 540 n.4.

Further, by relying on and incorporating its 1997 Final Environmental Impact Statement, the Corps again, fails to meet its legal obligation to take a hard look at the lock replacement project. Simply adding more material to an already insufficient environmental impact statement does nothing to correct the original insufficiencies of the environmental impact statement, particularly when the Corps fails to address the same questions it left unanswered from the 1997 Final Environmental Impact Statement. The court specifically stated, "[i]n light of Hurricane Katrina, the underlying purpose of NEPA will not served if the Corps moves forward with the Industrial Canal Project according to a plan devised almost a decade ago. Without further study and planning, the project cannot be considered 'environmentally conscious.'" *Holy Cross*, 455 F.Supp.2d at 545.

II. THE CORPS FAILED TO TAKE A HARD LOOK AT THE ENVIRONMENTAL IMPACTS OF THE LOCK REPLACEMENT PROJECT.

A. The Corps Failed to Assess Risks to Public Health, Welfare, and the Environment of Dredging, Stirring Up, and Disposing of Contaminated Sediments and Soils.

1. The Corps Failed to Discuss Engineering Controls to Reduce the Risk of Harm the Project Poses.

The Corps does not discuss or take into account any "engineering controls that might be employed at the site to minimize exposure in human, wildlife, or aquatic receptors." *See generally* DSEIS, App. R Screening Level Human Health Evaluation. The Corps failed to take a hard look at the environmental impacts to fish and wildlife during the dredging process. It states that during dredging activities the short-term impacts on aquatic habitats "related to increased concentrations of ammonia, cooper, manganese, zinc, increased suspended sediments and a decrease in dissolved oxygen" will result in "some loss of less motile aquatic organisms," without qualifying that loss. DSEIS, vol. 1, at 136.

2. The Corps Failed to Discuss the Risk of Harm the Confined Disposal Facility Poses if it Leaks.

Additionally, the Corps dismisses the idea that the confined disposal facility will leak and become a danger to the public health and welfare of the environment. The Corps states simply that, "[t]he CDF will be designed to fully contain IHNC dredged material." DSEIS, App. R at 5. The Corps follows this statement by stating that "human exposure to material stored in the CDF is only expected to occur within the perimeter of the facility…[and] no health effects are expected to occur." Id. The Corps fails to provide any evidence to support its contention that exposure to the toxic sediments will have "no health effects."

3. The Corps Failed to Determine Whether the Dredged Sediments Will Exhibit Chronic Toxicity.

The Corps admits that some of the sediments it will be dredging are "predicted to be acutely toxic to freshwater benthic organisms" and others are "predicted to be acutely toxic to estuarine benthic invertebrates." DSEIS, vol. 1 at 138. However, the Corps also failed to examine whether the discharges will be chronically toxic to freshwater or estuarine benthic organisms. *See* Kohl Decl. ¶ 16.

4. The Corps Failed To Examine the Impacts of the Confined Disposal Facility on Groundwater and Aquatic Environment.

Further, the Corps failed to consider the impacts to the aquatic environment and groundwater from placing contaminated sediments in a confined disposal facility built in wetlands. *See* Declaration of Barry Sulkin ¶ 20, attached hereto as Exhibit 1. The Corps only analyzed the human health impacts of placing the contaminated sediments in the confined disposal facility, failing to examine the impacts to the aquatic environment. *See* Sulkin Decl. ¶ 21. To fulfill its legal duty to take a "hard look" at the project's impact on the environment, the Corps must consider impacts to the aquatic environment.

The Corps also failed to consider the impacts on the storage of the contaminated sediments on groundwater. "The Corps' 'Human Health Evaluation for Confined Disposal Placement of IHNC Dredged Materials' only used toxicity-based values and ignored groundwater protection values. Given the fact that the Corps plans to build a confined disposal facility in wetlands, the Corps should have examined the potential impacts of the contaminated sediment on groundwater." *See* Sulkin Decl. ¶ 22.

The Corps asserts, again without any proof, that "[m]igration of material from the CDF in the unlikely event of a catastrophic breach…would result in…dilution of the dredged material…before it would be transported to neighboring areas." DSEIS, App. R at 5. However, the Corps has offered no factual evidence to support this assertion. In fact, the expert declaration provided by Dr. Barry Kohl directly refutes this assertion, stating that "[d]eposits of contaminated sediments placed into the proposed disposal areas will be prone to inundation [and] erosion and contaminated sediments will wash into receiving water bodies." *See* Declaration of Dr. Barry Kohl ¶ 8, attached as Exhibit 2.

5. The Corps Failed To Explain How it Plans to Treat the Effluent Contaminated with Toxic Chemicals such as Tributylin, Total PCBS, Arochlor 1016, and Dieldrin.

The Corps admits that it will not be able to achieve safe levels of tributylin, total PCBS, Arochlor 1016, and dieldrin when dredging the Industrial Canal. *See* DSEIS, vol. 1 at 137 ("Adequate dilution would be attainable within a mixing zone complying with State of Louisiana requirements for all constituents except of tributylin, total PCBS, Arochlor 1016, and dieldrin."). It explains that "[e]ffluent treatment may be required when dredging areas of the IHNC with elevated concentrations of these constituents." *See* DSEIS, vol. 1 at 137. But the Corps never

explains how it plans to treat the effluent to protect water quality and aquatic organisms. And the Corps intends to rely on sucking up large volumes of water in a hydraulic dredge to somehow dilute the toxic pollutants. *See* DSEIS, vol. 1 at 137. The Corps must devise a plan to safely dredge and dispose of the contaminated sediments. It has yet to do so.

B. The Corps Failed to Identify Standards to Govern Sediment Disposal and Standards to Govern Discharges from the Disposal Facility.

The Corps was ordered by the Court to identify standards to govern the toxic sediment disposal. The Corps still has not done this. The Corps must give information about their standards for the management of contaminated soil, such as, the frequency of sediment testing and monitoring. Additionally, the Corps offers no standards to determine which sediments are "contaminated" and thus, disposed of in the confined disposal facility and which are "essentially uncontaminated" and suitable for open water disposal. The Corps simply states it will distinguish between "industrial waste" and "other contaminated soils" that are suitable for disposal in MRGO disposal areas. However, the Corps offers no concrete method for making this or any other determination on soil toxicity. The Corps does not even explain the difference between "industrial waste", "contaminated soils" and "uncontaminated soils". The Corps fails to complete a valid and useful exposure assessment citing only that "human exposure is only expected to occur at the perimeter of the facility" with "no adverse health effects." DSEIS, App. R, p. 5; *See also* Kohl Decl. at Ex. B ¶ 4

Finally, the U.S. Fish and Wildlife Service notified the Corps of standards that the National Oceanic and Atmospheric Administration promulgated (EIS, vol. 6 § 11 at 9.) to address the potential harmful effect of contaminated material on the environment, including aquatic organisms.[5] Environmental professionals approach problems such as management of contaminated sediments by adopting standards to guide disposal decisions. Without knowing what standards will determine the fate of dredged materials, or be met by discharges from the engineered disposal facility, it is impossible to assess risks to the public and environment from exposure to contaminates from these materials. *See* Kohl Decl. at Ex. B ¶ 5. EPA has explained, "[t]he four steps of the risk assessment process include hazard identification, dose-response, exposure assessment, and risk characterization." 66 Fed. Reg. 66,228, 66,229 (Dec. 21, 2001). The holes in the Corps' Draft Supplemental Environmental Impact Statement, render it impossible to credibly assess the environmental impacts of disposing and discharging the dredged material. See Neighbors of Cuddy Mountain v. U.S. Forest Serv., 137 F.3d 1372, 1379 (9th Cir 1998).

C. The Corps Failed to Assess Short Term and Long-Term Impacts of Constructing an Engineered Disposal Facility in a Sensitive Ecosystem.

[5] NOAA Sediment Guidelines, available at: http://response.restoration.noaa.gov/topic_subtopic_entry.php?RECORD_KEY%28entry_subtopic_topic%29=entry_id,subtopic_id,topic_id&entry_id(entry_subtopic_topic)=88&subtopic_id(entry_subtopic_topic)=5&topic_id(entry_subtopic_topic)=2 (last visited Nov. 19, 2008) ("These guidelines, based on different evaluation methods, help us decide whether a certain amount of toxic chemicals (level of toxicity) is likely to harm the ecosystem.")

The Corps still fails to answer many questions it was ordered to answer by the Court. Among these questions are the following: the effectiveness of disposal facility; how the facility will be maintained; whether the facility will contain settling ponds and water quality treatment; who will maintain the facility; who will monitor the facility; and how often will the facility be monitored? Without this information the Corps Supplemental Environmental Impact Statement fails to take a hard look at the environmental consequences. *See* Kohl Decl. ¶ 13.

Furthermore, Dr. Kohl notes in his declaration that the Corps' use of suction dredging "will create a water/sediment slurry" which will "increase the probability that a significant amount of adsorbed contaminants will be discharged with the water into adjacent marshes and bayous during the dewatering phase of the confined disposal facility." *See* Kohl Decl. ¶ 15. Yet, the Corps did not examine the chronic affects to benthic organisms by contaminated, fine particles of sediment suspended in this discharge water accumulating as toxic bottom sediment in nearby wetlands. *See* Kohl Decl. ¶ 16.

D. The Corps Failed to Analyze How Long Engineered Confined Disposal Facility Will Last.

The Corps stated that the dredged material that is "unsuitable" for discharge into either the open water disposal area in the Mississippi River or the mitigation wetland creation site will be stored in a Confined Disposal Facility ("CDF"). DSEIS, at 41. The contaminated material housed in the CDF will be held "permanently" or "in perpetuity." DSEIS at 136. However, it is a legal and reality construct, that ***all*** engineered structures eventually fail.[6] *See* Sulkin Decl. ¶ 23. In fact, in the deposition of Linda Mathies, the Chief of the Environmental Function and Operations Division for the Army Corps stated, "[d]ikes fail." *See* Deposition of Linda Glenboski Mathies, at 197, ln. 17. The current project proposes two dikes in close proximity to the flood control levee. Despite the known fact that "dikes fail" the Corps has not considered this fact in their Draft Supplemental Environmental Impact Statement.

Additionally, the Corps fails to consider two issues beyond dike failure: ***1)*** rain accumulation between the dikes because of the flat topography and proximity of the structures and ***2)*** the potential catastrophic impact of the dike loading on the levee wall foundation. *See* Kohl Decl. ¶ 11. The Corps states that "further consideration should be given…to the potential for rain to accumulate between the two dikes…and…the potential impact of dike loading on the foundation underlying the flood control levee." DSEIS, App. E, at 21. The Corps acknowledges that the confined disposal facility and its dikes may undermine the levee or accumulate water, but fails to examine or quantify these dangers. The Corps failed to take a "hard look" at the environmental impacts associated with dike failures and the impacts of rain accumulation on the flood control levee.

[6] Cf. Nuclear Energy Inst., Inc. v. EPA, 372 F.3d 1251, 1298 (D.C. Cir 2004) (vacating a governmental decisions to only consider risks from a nuclear waste "repository's performance during the 10,000 years following waste placement.").

E. The Corps Failed to Analyze What Types of Storm Events the Confined Disposal Facility Will Be Designed to Withstand.

In direct violation of the Court's order to take a "hard look" at the environmental impacts of this project, the Corps refused to analyze or discuss the dangers associated with the confined disposal facility and large storm events. In fact, the Corps states that the issues of "potential overtopping of the dike in the event of flooding around the confined disposal facility" and "erosion of the confined disposal facility dikes as a result of failure of the adjacent flood control levee" are "beyond the scope of this effort." DSEIS, App. E at 25. The Court ordered the Corps to consider the effects of storms on the confined disposal facility, making it clear that these considerations are within the scope of this environmental impact statement. Despite this mandate, the Corps refused to analyze these issues.

The Court noted that the Post-Katrina landscape is vastly different—"the future of the MR-GO is in doubt; the location, height, and significance of the levees are being re-evaluated; and priorities are shifting from the transportation needs of the community to the restoration of basic infrastructure." *Holy Cross*, 455 F.Supp.2d at 539. The Court further held that, "[t]o ignore these facts is to ignore reality…and [f]or the law to have any credibility or respect, it must be grounded in reality." *Id.*

The Corps admits that during Katrina, there were two locations on the *north* bank of the MRGO/GIWW that suffered storm induced failures. DSEIS, App. E, p. 23. Despite the fact that these failures did not occur at the portion of the levee directly adjacent to the confined disposal facility site, significant flooding occurred throughout the area, including the proposed confined disposal facility site. *Id.* In fact, expert Dr. Barry Kohl cites that there were "17 post-Katrina breaches along the levee which borders the MRGO." *See* Kohl Decl. ¶ 6. Hurricane Katrina revealed the vulnerability of the Corps plan to dispose of contaminated sediments in a "confined disposal facility" next to the MRGO. Further the Corps admits that modeling the potential for overtopping and impacts of high velocity flows from levee failure should be undertaken, "to help in determining what protection the CDF may require." DSEIS, App. E, p. 25. Yet, the Corps failed to reevaluate their disposal plans in light of the Hurricane Katrina damage to the MRGO levee system. *See* Kohl Decl. ¶ 10.

Additionally, the Corps has not examined the interaction between the rebuilding of Corps' GIWW hurricane levee and construction of the confined disposal facility. The Corps failed to address whether the confined disposal facility will be built or used before the levees are finished, and how flood protection will be maintained while work on the lock is being completed. *See* Kohl Decl. ¶ 12. The Corps has not examined the increased risk of flooding while the eastbank bypass channel is built, or whether the use of the road parallel to the eastbank floodwall will affect the structural integrity of the floodwall. *See* Kohl Decl. ¶ 14. The Corps has failed to specify any additional flood protections that may need to be implemented protect adjacent neighborhoods in light of these affects. *See* Kohl Decl. ¶ 14. The Corps also failed to address how the confined disposal facility will be maintained and how often it will be monitored over the life of the project. *See* Kohl Decl. ¶ 13.

In fact, the Corps left for some indefinite time in the future the following tasks: "quantifying the actual risk of flooding and overtopping of the CDF dikes;" "quantify[ing the] potential for material losses from the CDF, and evaluat[ing] potential environmental impacts based on plant and animal uptake data;" "determining the setback requirements from the flood control levee;" and "armoring requirements to protect the CDF dikes in the event of levee failure." *See* DSEIS, App. E at 48. Without looking at the risks that hurricanes pose to the confined disposal facility, the Corps could not take a hard look at the environmental impacts of the project. And without examining the setback and armoring requirements of the confined disposal facility, the Corps could not get an accurate picture of the costs of the project to weigh the costs and benefits of the lock replacement project. Until the Corps answers these questions about the confined disposal facility, it cannot meet its requirement to take a hard look at the environmental impact of the lock replacement project.

F. The Corps Did Not Take A Hard Look at the Project's Impact on Safety Issues Related to Hurricane Protection Levees and Floodwalls.

The Corps failed to take a hard look at safety and levee stability issues relating to the lock replacement project. *See* Declaration of Dr. Alexander Kolker, at ¶ 7 & 8, attached as Exhibit 3. One particular concern is the subsurface geology in and around the area where it proposes to construct the new lock and dredge the canal. *See* Kolker Decl. ¶ 7. Numerous organic rich and water permeable clay deposits have been found to exist underneath the levees in the Lower Ninth Ward. *See* Kolker Decl. ¶ 7. Water flow through these layers has the potential to undermine the structural stability of the floodwalls, and may have contributed to their collapse during Hurricane Katrina. *See* Kolker Decl. ¶ 7. The Corps has not adequately searched for or identified these layers, nor have they devised a plan for dealing with them during construction. *See* Kolker Decl. ¶ 7.

Furthermore, as the canal depth is increased through dredging, it is possible that more permeable strata will be exposed, thereby increasing the potential to undermine the levees and floodwalls. *See* Kolker Decl. ¶ 8. It is important for the Corps to examine subsurface geology to ensure that it will not be dredging down into soils that would permit water to flow beneath the levees and floodwalls, undermining the levees and floodwalls and compromising hurricane protection. *See* Kolker Decl. ¶ 8. Dr. Kolker urges the Corps to consult with an independent, professional engineer to critically evaluate all safety concerns surrounding this construction. *See* Kolker Decl. ¶ 8 Because the Corps has not examined the subsurface geology in and around the area of the lock replacement project and failed to examine the potential to undermine the levees and the floodwalls, it failed to take a hard look at the environmental impacts of the lock replacement project.

G. The Corps Failed to Examine All the Costs of this Project, Rendering Its Cost-Benefit Analysis Insufficient and the Obscuring the Fact that the Lock Replacement Project is Not Economically Justified.

The Corps must demonstrate that with regard to this specific project, they made a "good faith consideration" of the environmental impact of the project. *Environmental Defense Fund, Inc. v. Corps of Engineers, supra,* 470 F.2d at 300. Additionally, the Corps must consider modifying or dropping the project if the environmental costs are sufficient to outweigh the benefits. *Id.* To meet the "good faith consideration" test, the agency must show that it has adequately weighed the relevant environmental factors in deciding whether and how to go forward with the project. *Id.*

1. The Decision to Deepen the Canal Lacks Economic Justification.

The Corps' original plan was to construct an approximately 22-foot deep lock to accommodate barge traffic. DSEIS, vol. 1 at 3. The Corps identified this plan as the most economically efficient option, explaining that a "larger lock was not incrementally justified (the additional benefits attributed to the increased size did not offset the additional costs to build the increased size)." *Id.* Nonetheless, the Port of New Orleans sought a deeper lock and channel for deep-draft ships. *Id.* The Corps agreed to install the deeper lock and deepen the channel to 36 feet increasing the environmental impacts of dredging and stirring up potentially toxic sediments. DSEIS, vol. 1§ 2 at 2.

However, the Corps admits that since Hurricane Katrina, there has been a reduction in not only large barge traffic, but a reduction in lockages and total vessels using the lock for passage. DSEIS, vol 1 § 5 at 77. The reduction in both small and large vessel traffic negates the benefits of a deeper lock. First the Corps states that "because shallow draft benefits comprised about 80 percent of the total project benefits, [the benefits should be] determined by focusing on the shallow draft benefit category." DSEIS, App. O at 3. Then, the Corps states "deep draft benefits represent a small portion of the total project benefits, such that only a large increase in deep draft activity could influence the project justification." DSEIS, App. O at 7. Yet there is no large increase in deep draft vessels, and data shows a decrease in overall traffic. Therefore, the project is not economically justified.

Additionally, the Corps' cost-benefit analysis shows that in four out of the six cost-benefit scenarios, the costs outweigh the benefits. DSEIS, App. O at 14. Only in two of the six cost-benefit scenarios is there a ratio greater than 1-to-1. Id. Further, the 1.56 and 1.63 benefit costs ratios are only attainable at a Federal Discount Rate of 4.875 percent. *Id.* The Federal Discount Rate is the short-term interest rate that the federal government charges to commercial banks on loans they receive from the Federal Reserve Bank's lenders.[7] This interest rate is unrealistically low given the current economic climate and recent bank bailouts. Further, Executive Order 12893 and OMB Circular A-94 require that benefits, costs, and benefit-to-cost ratios for new infrastructure investments of all federal agencies be evaluated at a discount rate of

[7] *See* http://www.federalreserve.gov/monetarypolicy/discountrate.htm.

7.0 percent to facilitate comparison and decision making.[8] Using the 7.0 percent interest rate, the project would fail to meet a benefit-cost ratio of 1-to-1.[9]

2. The Corps Failed to Consider the Benefits of Functioning Wetlands.

Wetlands serve many economic and environmental functions that the Corps has not considered. "The habitat value assessment was not an appropriate measure for the value of the wetlands the Corps plans to destroy in order to build the graving site and the confined disposal facility." *See* Sulkin Decl. ¶ 33. Wetlands act as flood barriers, water filters and provide an important wildlife habitat. Foremost is the availability of wetlands to absorb flood waters. Wetlands have the ability to mitigate storm surge and flood waters much like those which ravaged our coast in 2005. A wetland one acre in size will store 330,000 gallons of water when inundated to a depth of one foot.[10] Further, a ten acre wetland will hold 1.5 million gallons with a six-inch rise in water level.[11] The Corps has previously studied the link between wetland loss and storm damage and estimated that "a loss of 8,423 acres of wetlands within the basin would result in annual flood damages of over $17,000,000."[12]

A recent study published by the Royal Swedish Academy of Sciences examined the correlation between monetary damage caused by a windstorm or hurricane and the local wetlands in order to attempt to quantify wetlands' flood and storm surge protection values.[13] The study valued coastal wetlands in Louisiana an average $4,200 per acre, per year.[14] The study suggests that wetlands in and around New Orleans are worth even more as storm protection on an annual basis.[15] Adding in the value of additional ecosystem services, the total value of each acre of wetlands is approximately $33,000 per acre, per year.[16] The study also acknowledged that coastal wetlands act as "horizontal levees" that are maintained by nature and are "far more cost-effective than constructed levees."[17]

The Corps failed to consider these values when it analyzed its plan to destroy wetlands and evaluated the possibility of placing contaminated sediments in landfills. To put the wetland values in perspective, using recent valuation data, the 244 acres of wetlands the Corps plans to destroy would have the value of $8,052,000 per year. The proposed mitigation of 37 acres would

---

[8] *See* Circular A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs," *available at* http://www.whitehouse.gov/omb/circulars/a094/a094.pdf.
[9] *Id.*
[10] *See* FEMA TRAINING DOCUMENT, CH. 8 FLOODPLAIN NATURAL RESOURCES AND FUNCTIONS, p. 3. Available at http://training.fema.gov/EMIWeb/edu/docs/fmc/Chapter%208%20-%20FLOODPLAIN%20NATURAL%20RESOURCES%20AND%20FUNCTIONS.PDF
[11] W. Niering, THE LIFE OF THE MARSH: THE NORTH AMERICAN WETLANDS 191 (1966).
[12] Sather, J. H.; Smith, R. D, AN OVERVIEW OF MAJOR WETLAND FUNCTIONS AND VALUES FWSOBS 84/18 (1984).
[13] Costanza, R. et. Al. THE VALUE OF COASTAL WETLANDS FOR HURRICANE PROTECTION, AMBIO Vol. 37, No. 4 JUNE 2008.
[14] *Id*. tbl. 3.
[15] *Id*. fig. 4.
[16] *See id.* at 247
[17] *See id.*

be $1,221,000. Assuming that the destruction proposed would be finished and completely undone (which is highly suspect) within 7 years, and the mitigation would be completed after year 7, it would take 46 years to replace the lost benefits of the proposed destruction, which is completely unacceptable and does not coincide with the concept of "no net loss."

Given the location of the wetlands as a buffer between the Mississippi River Gulf Outlet—which acted as a funnel during Hurricane Katrina to bring floodwaters into New Orleans—and residential neighborhoods, the Corps should have considered the wetlands' flood protection value. *See* Sulkin Decl. ¶ 33. "The focus on habitat value rather than flood protection for wetlands in an urban area ignores the true value of the wetlands the Corps plans to destroy." *Id.* Further, the Corps' plan to compensate for wetland losses by creating new habitat instead of additional flood storage capacity, places human health at risk from severe flooding during hurricanes and other flooding events. *Id.*

In addition to lowering storm surge, wetlands fill an important economic role by functioning as a vital fisheries habitat. Wetlands provide an essential link of the life cycle of 75 percent of the fish and shellfish commercially harvested in the United States.[18] Further, in 2004 landings of crab, salmon, and shrimp (all animals that make their homes in wetlands for all or at least part of their lives) were valued at $1,167 billion.[19] The act of filling in wetlands decreases the habitat area for dependant fish and shellfish and will impact not only the Louisiana fishing industry, but the nation's fishing industry.

3. The Corps Failed to Consider the Costs of Downstream Dredging.

By dumping dredged sediment into the Mississippi River, the Corps plans to increase the river's sediment load by 6%. *See* Declaration of Dr. Alexander Kolker, attached as Exhibit 3 ¶ 7. This increase in sediment in the river will lead to downstream shoaling, which will increase dredging costs downstream. *See* Kolker Decl. ¶ 7. The Corps ignored these costs when it calculated the benefit/cost ratio of the lock replacement project. Because the Corps failed to consider these costs, the benefit/cost ratio is actually lower than the Corps has calculated.

In addition, by adding more sediment to the Mississippi River without considering downstream dredging costs, the Corps could be jeopardizing crucial coastal restoration projects. For example, the West Bay Sediment Diversion project, downstream from where the Corps wants to dump dredged spoil into the Mississippi River, may be discontinued because sediment from the project has caused shoaling and money has not been set aside for dredging.[20] Adding even more sediment could increase dredging costs even further, potentially stopping the diversion project.

---

[18] U. S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS)
[19] *See* Note 4.
[20] "Mississippi River Diversion Slated For Closure Because of Threat to Shipping," Times Picayune, Nov. 6, 2008, *available at* http://www.nola.com/news/index.ssf/2008/11/mississippi_river_diversion_sl.html.

4. The Corps Failed to Consider Costs of Dredging the Gulf Intracoastal Waterway to Accommodate Deep-draft Traffic.

The Corps plans to dredge the Industrial Canal to 36 feet deep in order to accommodate deep-draft traffic. With the closure of the Mississippi River Gulf Outlet, the only route for deep-draft traffic would be along the Gulf Intracoastal Waterway (GIWW). If the GIWW is not normally dredged to 36 feet deep for maintenance dredging, the cost of dredging the GIWW lower must be added to the costs of the project. Also, the Corps must consider the cumulative impacts of dredging the GIWW to 36 feet deep.

5. The Corps Failed to Consider Costs to the Community of Lost Business Revenues and Increased Vehicular Delays During the Lock Construction.

The Corps recognizes that during construction, local businesses will lose revenue and those living in the Holy Cross and Lower Ninth Ward neighborhoods will experience significant vehicular traffic delays during construction. Yet the Corps failed to take these costs into consideration when calculating the benefit/cost ratio of the lock replacement project. The Corps' failure to take these costs into consideration is arbitrary and capricious, particularly when the project's benefits are all tied to reduced delayed lock traffic but the Corps turns a blind eye to the economic costs of vehicular delays during construction.

H. The Corps Failed to Examine Alternative Dredging and Disposal Methods and Procedures That Would Reduce Environmental Harms.

1. The Corps Arbitrarily Dismissed the Alternative of Using a Bucket Dredge To Reduce Environmental Impacts of the Project.

The Corps arbitrarily dismissed the possibility of using an environmental bucket clamshell dredge designed to minimize re-suspension of sediment during the dredging operation. *Cf.* Public Notice of Proposed Maintenance Dredging of the Gulf Intracoastal Waterway (GIWW), Inner Harbor Navigation Canal, New Orleans, LA, dated May 16, 2006. The Corps devoted only one sentence in the entire DSEIS to the alternative of using a clamshell bucket dredge. The Corps claims that "[b]ucket dredging is a substantially slower method and dredge material must be handled twice in order to temporarily or permanently dispose of the material." DSEIS, vol. 1 at 56. But the Corps failed to quantify the cost of delay from using a clamshell dredge for and balance those costs against the environmental harm that could be avoided if the Corps used a clamshell bucket dredge.

The Corps also failed to consider the possibility of using a clamshell bucket dredge to dredge the most contaminated areas. By ignoring the possibility of using a clamshell dredge, the Corps inflated the costs of disposing contaminated sediments in a landfill. The Corps' current costs analysis for landfill disposal adds in costs for dewatering contaminated sediments before disposing them in a landfill. However, dewatering is not necessary if the Corps uses a bucket

dredge. Therefore, the Corps could save on costs of landfill disposal if it used a bucket dredge. By arbitrarily dismissing the possibility of using a bucket dredge to minimize harm to the environment, the Corps has failed to reduce environmental harm from the lock replacement project.

2. The Corps did not Consider Placing the "Upland Confined Disposal Facility" in an Actual Upland.

The Corps admits that "a confined disposal facility may be needed to contain dredged material requiring upland disposal." DSEIS, App. E at vii. The term "upland" is used nationwide by the Corps and environmental scientists to refer to areas that are neither water *nor* wetlands. *See* Sulkin Decl. ¶ 12. Wetlands may delineate the area between water and uplands. Id. The only location the Corps has considered to build the confined disposal facility for the project is in wetlands within the coastal zone. The Corps even acknowledges that the area where it plans to build the confined disposal facility is "primarily wetlands." DSEIS at 127. Therefore, the confined disposal facility is not an "upland" facility. *See* Sulkin Decl. ¶ 13. Because the Corps does not plan to build the confined disposal facility in uplands, the Draft Supplemental Environmental Impact Statement contains incorrect information, showing that the Corps failed to take a "hard look" at the environmental impacts of this project.

The Corps failed to consider alternative locations in actual upland for a confined disposal facility. *See* Sulkin Decl. ¶ 15; Kohl Decl. ¶ 9. The confined disposal facility is not a "water-dependent" activity and thus, does not need to be sited near water. *See* Sulkin Decl. ¶ 16. The Corps failed to consider alternate locations, and it is likely and presumed that there are alternative locations for a confined disposal facility that would have fewer impacts on the aquatic environment than the Corps' proposed location. *See* Sulkin Decl. ¶ 17. The Corps must dispose of contaminated sediments in an upland site, not wetlands that are prone to flooding, as the Corps currently proposes. *See* Kohl Decl. ¶ 9.

Further, because the Corps does not plan to build the confined disposal facility in uplands, the DSEIS contains incorrect information, and the Corps' reliance on guidance regarding upland disposal facilities fails to provide sufficient protection to the aquatic environment. *See* Sulkin Decl. ¶ 14.

3. The Corps Must Dispose of Sediments Containing PCBs in a Landfill.

The Corps evaluated the possibility of disposing contaminated sediments in a landfill, but ultimately dismissed the option as too expensive. Regardless of the expense, the Corps must put sediments containing PCBs in a landfill. Failure to dispose of PCB and other toxic sediments in a landfill violates state and federal law governing hazardous waste disposal.

4. The Corps Failed to Consider the Alternative of Only Installing a Shallow-Draft Lock.

Even though a deep-draft lock is not economically justified, the Corps failed to examine the alternative of building a shallow-draft lock. The Corps failed to examine whether building a shallow-draft lock and only dredging the canal to shallow-draft depths would reduce harms to the aquatic environment. The Corps also failed to explain how installing a shallow-draft lock instead of a deep-draft lock in not practicable. By failing to examine these alternative, the Corps failed to reduce harm to the aquatic environment to the maximum extent practicable.

I. The Corps failed to Demonstrate How the Proposed Mitigation Plan Will Mitigate For The Environmental Harm the Corps Will Cause When It Destroys Wetlands for the Project.

1. The Corps Fails to Provide a Clear Plan for Mitigation.

The Corps fails to demonstrate in the DSEIS how the proposed mitigation plan will make up for the environmental harm the Corps will cause when it destroys hundreds of acres of wetlands for its confined disposal facilities and graving site. First, the Corps fails to provide a clear picture of the mitigation it plans to undertake. Throughout the DSEIS, the Corps estimates the mitigation area to be anywhere from 31 to 178 acres in size. *See* DSEIS, App. Q at 18. The Corps' 404(b)(1) analysis give no indication of how the mitigation will work, other than depositing the dredged spoil in the open water of the mitigation site. Simply dumping dredged material into open water does not constitute mitigation. The analysis must show how the mitigation will take place in order to ensure that a healthy natural wetland will result from the dredge disposal. The Corps states that "it is anticipated that wetlands plants would colonize this platform, and that the disposal site would transform into a functioning marsh." DSEIS, App. Q at 7. It is extremely difficult to create a wetland, and the Corps must present a working plan showing that this mitigation has a good chance for success.

2. The Corps Must Provide For Alternate Mitigation If There Is Not Enough Suitable Material to Mitigate for the Wetlands Loss.

The Corps admits that it may not actually be able to complete its mitigation in the area where it would prefer to do so. The Corps suggests that "If the entire mitigation cannot occur at the triangular-shaped mitigation area located south of Bayou Bienvenue due to a lack of suitable material, DEMVN would fully mitigate for the loss...." DSEIS, App. Q at 59. The Corps fails to elaborate on this contingency. The Corps must mitigate for the impacts from the lock replacement project, and the lack of a working plan that will actually mitigate for the project's impacts demonstrates that the Corps has not taken a hard look at the mitigation for this project.

3. The Corps Must Mitigate For Harms Caused by the Confined Disposal Facility Backfill Site.

The Corps has not planned to mitigate for the impacts caused by the CDF Backfill Site. *See* DSEIS, App. Q at 59. The Corps claims that these impacts would only be "temporary," but this project will last over 10 years, so mitigation for these 138 acres must be done. The Corps'

claims that "The CDF Backfill site is expected to naturally reforest after construction activities are completed" do not excuse the Corps from its obligation to mitigate for the multiple years in which that wetland value will be lost because of the project. *See* DSEIS, App. Q at 59.

4. The Corps Has Not Supported With Evidence Its Conclusion That Wetlands It Will Destroy During the Project Will Re-vegetate Themselves.

Throughout Appendix Q, the Corps states that the CDF disposal site, CDF Backfill Site, Graving Site, and Stockpile Area will all re-vegetate. *See* DSEIS, App. Q at 24, 27, 28,59, 61, 62. However, the Corps provides no evidence to support this assumption. The Corps states that "it is anticipated that the CDF Disposal site would reforest with native hardwoods after the completion of construction." DSEIS, App. Q at 59. However, the Corps also acknowledges that "much of the recruitment is Chinese tallow," which is not a native hardwood. DSEIS, App. Q at 19. Appendix Q gives no evidence that desirable wetland species will dominate these cleared areas.

5. The Corps Fails To Identify Where It Plans To Find Additional Borrow Materials for the Graving Site.

The Corps states that "if it is determined that the volume of material in the stockpile is not adequate to restore the graving site to the preconstruction elevation, borrow material would be imported to reach this elevation." *See* DSEIS, App. Q at 23. In order to assess the impacts of this project under the Clean Water Act's § 404(b)(1) guidelines and assess cumulative impacts of the project, the Corps must identify from where it would take the additional borrow materials.

6. The Corps Should Have Consulted EPA Region 6 Regarding Water Quality Screening Criteria.

The DSEIS does not indicate that the Corps consulted with EPA Region 6 regarding water quality screening criteria for hazardous waste sites. Instead, the Corps used criteria from EPA Region 4. *See* DSEIS, App. Q at 30. The Corps should have consulted with EPA Region 6, which is responsible for water quality issues in Louisiana.

7. The Corps Failed to Examine Alternative Locations for the Mitigation, Confined Disposal Facility, or Graving Sites.

The Corps failed to examine alternative locations for mitigation, the confined disposal facilities, or the graving sites. The Corps failed to examine any alternatives to the locations it chose for the mitigation, confined disposal facility, or graving sites. By not examining alternative locations for any the portions of the lock replacement project the Corps wants to perform in wetlands, the Corps has failed to show that there are no practicable alternatives to destroying several hundred acres of wetlands for the lock replacement project.

8. The Corps Fails To Articulate a Clear Vision as to What Type of Wetland the Mitigation Should Be.

In Appendix Q (the Corps' 404(b)(1) analysis), the Corps states that the site consists of shallow, brackish water with scattered, remnant cypress stumps. *See* DSEIS, App. Q at 18. Yet, the Corps intends to make the area into a "functioning marsh." DSEIS, App. Q at 7. However, Appendix Q also acknowledges that other organizations are interested in restoring these areas. Many of these groups intend to restore this area into a cypress swamp, which is very different from a brackish marsh. This again is reason to include a mitigation plan to make sure that these mitigation efforts are not contrary to a larger plan to restore a fresher water regime to the area.

9. The Mitigation Plan Does Not Account For The Wetlands' Storm Buffering Abilities and Water Storage Capacity.

The lock replacement project proposes to impact almost 250 acres of wetland and replace them with as little as 37 acres. This could be devastating, as these wetlands are very close to urban New Orleans and act as a buffer to hurricanes and flood waters. Wetlands have a tremendous ability to absorb flood waters. In fact, an acre of wetland can store about a million gallons of water.[21] This project would reduce this area's flood buffering capability by 250 million gallons. Additionally, while research is on-going, studies show that wetlands can be effective in reducing storm surge from hurricanes. Studies suggest that 4 miles of intact marsh can reduce storm surge by a foot.[22] These wetlands protect a particularly vulnerable area of New Orleans, and these impacts (storm surge protection and flood storage) must be included in an analysis of cumulative and secondary impacts. *See* Sulkin Decl. ¶ 34.

III. ASPECTS OF THE PROPOSED PROJECT VIOLATE CLEAN WATER ACT REGULATIONS, MAKING THE PROJECT, AS PROPOSED, ILLEGAL.

Although the Corps does not grant itself a permit for discharges or dredge or fill material, "the Corps authorizes its own discharges of dredged or fill material by applying all applicable substantive legal requirements, including public notice, opportunity for public hearing, and application of the section 404(b)(1) guidelines." 33 C.F.R. § 336.1. Therefore, all Corps projects must comply with the 404(b)(1) guidelines. The lock replacement project does not comply with the 404(b)(1) guidelines, and is therefore illegal as proposed.

A. The Corps Failed To Examine Alternative Non-Wetland Locations for the Confined Disposal Facility and Lock Construction.

The Corps failed to comply with Clean Water Act regulations when selecting its preferred alternative for the lock replacement project. *See* Sulkin Decl. ¶ 15, 19. Under federal law "no discharge of dredged or fill material shall be permitted if there is a practicable

[21] *See* EPA, Office of Water "Wetlands: Protecting Life and Property from Flooding" May 2006, EPA843-F-06-01.
[22] *See* Costanza, R. et. Al. THE VALUE OF COASTAL WETLANDS FOR HURRICANE PROTECTION, AMBIO Vol. 37, No. 4 JUNE 2008.

alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). Where the project intends to discharge dredge or fill material into a special aquatic site, such as a wetland, and that aspect of the project is not "water dependent," the law presumes that "practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise." *Id*. § 230.10(b).

The Corps failed to examine alternative, non-wetland locations in which to build the proposed confined disposal facility. A confined disposal facility is not "water dependent," therefore the law presumes that there are practicable alternatives to building a confined disposal facility in the wetlands. *See* 40 C.F.R. § 230.10(b). The Corps failed to "clearly demonstrate" that there is no place where it could build a confined disposal facility other than in the wetland area they have proposed. *See* Sulkin Decl. ¶ 17. In order for the Corps to comply with Clean Water Act regulations, the Corps must examine alternate non-wetland locations in which to dispose the dredged spoil.

The Corps also failed to examine alternative, non-wetland locations where it could construct the lock and then float the lock in place. The Corps has not shown under the Float-in-Place plan that there are no alternative locations to build the lock that would destroy no or fewer wetlands. *See* Sulkin Decl. ¶ 18. The Corps examined the cast-in-place alternative, which would destroy no wetlands, and the float-in-place alternative, which would destroy wetlands. The Corps failed to show how the cast-in-place is not practicable or to show that there is not another location where the lock could be built and then floated or transported to the new lock location. The Corps' failure to examine alternatives to destroying hundreds of acres of wetlands for the confined disposal facility and graving site violates the law.

B. The Corps Failed to Evaluate the Alternative Of Using a Clamshell Bucket Dredge To Reduce Environmental Harms from Dredging.

Federal regulations prohibit the Corps from discharging "dredged or fill material… if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). The Corps failed to evaluate and consider using a method of dredging that would cause less harm to the aquatic ecosystem than hydraulic dredging. The Corps arbitrarily dismissed the possibility of using an environmental bucket clamshell dredge designed to minimize re-suspension of sediment during the dredging operation, claiming that "[b]ucket dredging is a substantially slower method and dredge material must be handled twice in order to temporarily or permanently dispose of the material." DSEIS, vol. 1 at 56.

The Corps' failure to actually examine using a bucket dredge as a less-harmful alternative to hydraulic dredging violates federal regulations. Not only would bucket dredging reduce the threat of contaminating the aquatic ecosystem and the dredge point, but it would reduce damage to water quality at the confined disposal and mitigation sites as well. The Corps dismissed the

alternative without quantifying the cost of delay from using a clamshell dredge, balancing those costs against the environmental harm that could be avoided if the Corps used a clamshell bucket dredge, and showing that using a bucket dredge is not a practicable alternative to hydraulic dredging that would reduce harm to the aquatic environment.

C. The Corps' Dredging Plan Violates The Clean Water Act.

Federal regulations prohibit dredging or discharging fill material if that dredging or discharging would violate "any applicable State water quality standard." 40 C.F.R. § 230.10(b)(1). Yet, the Corps admits that it will not be able to achieve safe levels of tributylin, total PCBS, Arochlor 1016, and dieldrin when dredging the Industrial Canal. *See* DSEIS, vol. 1 at 137 ("Adequate dilution would be attainable within a mixing zone complying with State of Louisiana requirements for all constituents except of tributylin, total PCBS, Arochlor 1016, and dieldrin."). It explains that "[e]ffluent treatment may be required when dredging areas of the IHNC with elevated concentrations of these constituents," but it has not devised a plan to treat the effluent so that it is safe and meets Louisiana's water quality standards. Therefore, the Corps may not complete the lock replacement project as long as the project intends to violate water quality standards for tributylin, total PCBS, Arochlor 1016, and dieldrin.

D. The Corps' Proposed Mitigation Violates the Clean Water Act.

An Environmental Impact Statement must include a discussion of the steps that could be taken to mitigate the environmental consequences of the proposed action. *See* 42 U.S.C. § 4332. As a part of the Corps' mitigation plan, the Corps wants to allow discharge and runoff from the confined disposal facility to enter Bayou Bienvenue. The purpose of mitigation is to compensate for unavoidable impacts to the aquatic environment. *See* Sulkin Decl. ¶ 28. The Corps admits that the discharge will not meet water quality standards and instead of devising a plan to treat the water before disposing of it in Bayou Bienvenue, the Corps plans to attain a water quality waiver. DSEIS, at 5; *see* Sulkin Decl. ¶¶ 29, 31. The waiver will allow the Corps to discharge toxic effluent into the bayou impairing the overall water quality of the bayou. The Corps' mitigation plan must compensate for the negative environmental impacts of this project to wetlands and water quality. ***Yet the Corps plans to mitigate harms to water quality by harming water quality even further.***

The Corps' mitigation plan, in which it intends to dump dredged sediments into open water in an attempt to build wetlands, is illegal. Federal regulations prohibit dredging or discharging fill material if that dredging or discharging would violate "any applicable State water quality standard." 40 C.F.R. § 230.10(b)(1). Because the Corps admits that its mitigation plan, which involves placing dredged sediments into a triangle-shaped portion of Bayou Bienvenue, would violate water quality standards, that mitigation plan is illegal. The Corps must go back to the drawing board and devise a mitigation plan that will not violate water quality standards.

Additionally, when analyzing the impacts of the project on Bayou Bienvenue, the Corps assumed that "the entire width and depth of the bayou are enveloped in the mixing zone."

DSEIS, at 137. "It is inappropriate to use the entire waterbody as a mixing zone when determining water quality impacts and compliance with water quality limitations." *See* Sulkin Decl. ¶ 30. The Corps' plan to seek a water quality waiver for its "mitigation" plan is not proper mitigation. "A 'mitigation' plan that harms water quality and seeks a water quality wavier does not compensate for harms to the aquatic environment." *See* Sulkin Decl. ¶ 32.

IV. THE LOCK REPLACEMENT PROJECT IS CONTRARY TO THE PUBLIC INTEREST AND THEREFORE, THE CORPS MUST RECOMMEND THE NO-BUILD/DEAUTHORIZATION ALTERNATIVE.

The Corps must select the no-build alternative and recommend that Congress deauthorize the lock replacement project because it is not in the public interest. Federal regulations direct that the Corps' "district engineer will… follow the guidance in 33 CFR 320.4(b)… when evaluating Corps [projects] in wetlands." 33 C.F.R. § 336.1. To determine if a proposed project is consistent with the public interest, "[t]he benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments." 33 C.F.R. § 320.4(a)(1). The district engineer must consider all factors that may be relevant to the proposal when evaluating whether a project is in the public interest, including: conservation, aesthetics, general environmental concerns, wetlands, wildlife values, and the welfare of the people. *See id*.

The Corps failed to balance the harm to the local community from loss of valuable wetlands that provide valuable flood storage capacity and buffer storm surge, the disruption of their lives for years during the lock construction project, the loss of business revenues during construction, the loss of time because of traffic delays during construction, the potential undermining of the flood walls and hurricane protection levees from the canal deepening and widening and the confined disposal facility, the risk of contamination when the confined disposal facility fails, and the threat to downstream coastal restoration projects from increased shoaling downstream caused by the increased sediment load in the Mississippi River with the limited benefits that a few limited navigation interests might reap from the project. Had the Corps done so, it would have concluded that the project is contrary to the public interest. *See* 33 C.F.R. § 320.4(a).

Federal regulations acknowledge that "[m]ost wetlands constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest." 33 C.F.R. § 320.4(b)(1). Those regulations list multiple ways in which wetlands are valuable, including wetlands that are "significant in shielding other areas from… storm damage," those that "serve as valuable storage areas for storm and flood waters," and those "wetlands which are unique in nature or scarce in quantity to the region or local area." *Id*. at § 230.4(b)(2). The regulations prohibit the Corps from granting a permit to fill in wetlands that shield areas from storm damage, serve as valuable storage areas for storm and flood waters, or are unique or scarce to the area unless the district engineer, after his public interest analysis, concludes "that the benefits of the proposed alteration outweigh the damage to the wetlands resource." *Id*.

As part of the lock replacement project, the Corps plans to destroy hundreds of acres of wetlands for "confined disposal facilities" and a graving site. But the Corps ignored the fact that these wetlands shield the Lower Ninth Ward and the Holy Cross neighborhoods from storm surge, serve as valuable storage areas for storm and flood waters, and are unique in nature and scarce in quantity because they are located in an urban coastal area. By ignoring these important functions of the wetlands the Corps plans to destroy, the Corps' public interest analysis was arbitrary and capricious. By recommending a project that is not in the public interest, the Corps violates Clean Water Act regulations.

V. THE CORPS NEEDS A CLEAN WATER ACT § 402 PERMIT TO COVER POINT SOURCE DISCHARGES FROM THE CONFINED DISPOSAL FACILITY.

The Corps must obtain a Clean Water Act § 402 permit to cover any point source discharges of water from the confined disposal facility. According to the Draft Supplemental Environmental Impact Statement, the Corps plans to pump water from inside the confined disposal facility over the hurricane protection levee and into the Gulf Intracoastal Waterway. DSEIS, App. E at 18. The Draft Supplemental Environmental Impact Statement also contemplates "weir structures" to control[] discharge of effluent." DSEIS, App. E at 18; *see* Sulkin Decl. ¶ 25. Expert Barry Sulkin notes that, "[t]he Corps refers to both 'effluent' and 'runoff' being discharged from the confined disposal facility. The Clean Water Act requires a facility to obtain a § 402 permit for point source discharges from a facility." *See* Sulkin Decl. ¶ 26. The act of routing or pumping water from the confined disposal facility into the GIWW or Bayou Bienvenue constitutes a point source discharge into waters of the United States. *See* Sulkin Decl. ¶ 27. This point source discharge also requires the Corps to obtain Louisiana's version of a §402 permit, a Louisiana Pollution Discharge Elimination System Permit. *See* Sulkin Decl. ¶¶ 24, 27. Neither the 1997 EIS nor the current DSEIS address this issue.

VI. THE CORPS' PLAN TO DESTROY 250 ACRES OF COASTAL WETLANDS IS NOT CONSISTENT WITH LOUISIANA'S COASTAL RESOURCES PROGRAM AND MASTER PLAN.

A. The Corps Failed to Examine Whether All Aspects of the Lock Replacement Project Are Consistent With Louisiana's Coastal Resources Program.

When examining whether the lock replacement project and its proposal to destroy almost 250 acres of wetlands is consistent with Louisiana's Coastal Resources Program, the Corps ignored Louisiana's actual program and master plan. Instead of looking at Louisiana's plan and protections for its coastal resources, the Corps addressed the federal guidelines. The Corps cannot demonstrate consistency with Louisiana's program by only looking at the federal plan, because states may adopt more protections than the federal program requires. By only looking at the federal guidelines and not the state's guidelines, the Corps has not insured that the project is, to the maximum extent practicable, consistent with Louisiana's program. The Corps' failure to do so violates federal law. *See* 16 U.S.C. § 1456(c)(2) ("Any Federal agency which shall undertake any development project in the coastal zone of a state shall insure that the project is, to

the maximum extent practicable, consistent with the enforceable policies of approved State management programs.").

B. The Corps Failed To Show That All Aspects of the Lock Replacement Project Are Consistent with the Federal Guidelines or State Law.

Louisiana's Coastal Resources Program requires that "all activities shall be planned, sited, designed, and constructed, operated, and maintained to avoid to the maximum extent practicable significant" ***1)*** destruction or adverse alteration of wetlands, ***2)*** detrimental discharges or suspended solids into coastal waters, including turbidity resulting from dredging, ***3)*** discharges of toxic substances into coastal waters, ***4)*** adverse alteration or destruction or unique or valuable habitats, and ***5)*** increases in the potential for flood hurricane or other storm damages, or increased likelihood that damage will occur from such hazards. *See* La. Admin. Code tit. 43 pt. I §701.G.

The Corps can only show that it has avoided impacts to the "maximum extent practicable" where it shows that the:

> benefits resulting from the proposed use would clearly outweigh adverse impacts from noncompliance with the modified standard and there are no feasible and practicable alternative locations methods, and practices for that use that are in compliance with the modified standard and ***(1)*** significant public benefits will result from the use, or; ***(2)*** the use would serve important regional, state, or national interests, including the national interest in resources and the siting of facilities in the coastal zone identified in the coastal resources program, or ***(3)*** the use is coastal water dependent.

La. Admin. Code tit. 43 pt. I §701.H. The Corps admits that aspects of the lock replacement project will have significant impacts on coastal resources, but it has not demonstrated that those aspects of the project will lead to significant public benefit, serve important interest, or are coastal water dependent. Specifically, the Corps' confined disposal facilities, mitigation and graving sites will all have significant adverse impacts on coastal resources, but those aspects of the project lead to no public benefits, serve no important interests and are not coastal water dependent.

1. <u>The Corps has not Avoided Wetlands Destruction to the Maximum Extent Practicable</u>.

The Corps failed to demonstrate that it has avoided destruction of wetlands to the "maximum extent practicable," as state law and federal guidelines require. *See* La. Admin. Code tit. 43 pt. I §701.G.5. The Corps admits that "about 247 acres of bottomland shrub wetlands at the graving site and CDF facilities along the spoil bank of the GIWW would be cleared for project construction." DSEIS, App. I at 11. The Corps failed to demonstrate that it examined

alternative non-wetland locations at which to build the confined disposal facilities or graving site.

2. The Corps has not Avoided Detrimental Discharges of Suspended Solids to the Maximum Extent Practicable.

The Corps failed to show that it examined alternatives to its proposed mitigation plan, which would lead to "detrimental discharges of suspended solids into coastal waters" or alternative methods of dredging that would reduce turbidity. The Corps failed to evaluate the possibility of using a clamshell bucket dredge to reduce suspended solids during dredging and reduce the amount of contamination. The Corps' failure to do so violates state law and federal guidelines. *See* La. Admin. Code tit. 43 pt. I §701.G.11.

3. The Corps has not Avoided Discharges of Toxic Substances to the Maximum Extent Practicable.

The Corps failed to show that it has avoided "discharges of… toxic substances into coastal waters" to the "maximum extent practicable." *See* La. Admin. Code tit. 43 pt. I §701.G.13. The Corps' plan to use hydraulic dredging will produce a slurry of water and contaminated sediments. *See* Kohl Decl. at ¶ 15. Those contaminated sediments would be suspended in the water slurry, and will either settle into the coastal wetlands where the Corps plans to build its so-called confined disposal facilities, or it will leak from those facilities and contaminate the adjacent waterbodies. Because the Corps has not considered building the confined disposal facility in actual uplands or using a clamshell bucket dredge to reduce the risk of contaminating the aquatic environment during dredging, it has failed to demonstrate that it has avoided these impacts to the maximum extent practicable, as required by law.

4. The Corps has not Avoided Adverse Alternation of Valuable Urban Wetlands to the Maximum Extent Practicable.

The Corps failed to show that it has avoided, to the "maximum extent practicable," "adverse alteration or destruction of unique [and] valuable" urban coastal wetlands in a flood-prone area. *See* La. Admin. Code tit. 43 pt. I §701.G.16. The Corps suggests that the wetlands it plans to destroy "are not particularly valuable or unique." DSEIS, App. I at 14. Yet the Corps ignores the fact that the wetlands it plans to destroy are valuable in that they provide protection against storm surge and flooding and act as "horizontal levees" protecting the Lower Ninth Ward and Holy Cross neighborhoods, which were flooded following Hurricane Katrina.

5. The Corps has not Avoided Increases In the Potential For Flood, Hurricane or Storm Damage to the Maximum Extent Practicable.

The Corps failed to show that it has avoided, to the "maximum extent practicable," "increases in the potential for flood, hurricane, or other storm damage, or increases in the likelihood that damage will occur from such hazards." *See* La. Admin. Code tit. 43 pt. I §701.G.17. By destroying almost 250 acres of wetlands that provide flood storage capacity and

storm surge buffer protecting vulnerable areas such as the Lower Ninth Ward and Holy Cross neighborhoods, the Corps will increase the potential for flood and storm damage and increase the likelihood damage will occur from floods and storms. The Corps declined to examine whether the confined disposal facility or deepening of the Industrial Canal will undermine the levees and floodwalls, yet the Corps arbitrarily concludes that "the proposed project would not increase flooding potential" and "[a]dequate flood protection would be provided throughout the construction period." DSEIS, App. I at 14. The Corps cannot conclude that filling in wetlands will not increase flooding potential when it failed to quantify the current flood storage capacity of those wetlands.

6. The Confined Disposal Facilities, Mitigation, and Graving Sites are Not Coastal Water-Dependent Activities.

As support for its plan to destroy 250 acres of wetlands, the Corps states that "the IHNC lock replacement project is definitely water-dependent." DSEIS, App. I at 21. While the lock is water-dependent, may aspects of the project are not water dependent. For example, the confined disposal facilities, which are meant to safely store contaminated sediments, are **not** water dependent. On the contrary, the contaminated sediments would pose much less risk to human health and the environment if they were disposed of in an actual upland facility that is not hyrdrologically connected to sensitive wetland ecosystems and bayous. *See* La. Admin. Code tit. 43 pt. I §711.E. Because the confined disposal facilities and graving site are not coastal water dependent, the Corps' plan to destroy coastal wetlands for that portion of the project is not owed any deference.

7. The Corps has not Insured that Wetland Areas Will Be Restored to the Maximum Extent Practicable.

Also, the Corps makes no plans to insure that disturbed areas actually return to functioning wetlands. Instead, the Corps plans to leave the areas alone and hope for the best. This fails to meet the requirements that "[a]reas modified by surface alteration activities shall, to the maximum extent practicable, be revegetated, refilled, cleaned and restored to their pre-development condition upon termination of use." *See* La. Admin. Code tit. 43 pt. I §711.F.

8. The Corps has not Demonstrated That, To the Maximum Extent Practicable, Wetlands Are Not Drained or Filled.

The Corps fails to demonstrate that it has avoided, to the maximum extent possible, draining or filling wetlands. *See* La. Admin. Code tit. 43 pt. I §711.D. Instead, the Corps recognizes that "[t]he CDF and graving site would affect wetlands" and suggests that "at the conclusion of the project these areas would be returned to their former elevations and allowed to revegetate back to bottomland shrub hardwood." DSEIS, App. I at 21. The Corps fails to explain how it has avoided, to the maximum extent practicable, draining or filling wetlands. The Corps provides no explanation as to any alternatives it examined to destroying the wetlands or showing that it has no other option than to destroy wetlands.

C. The Corps' Plan to Destroy 250 acres of Coastal Wetlands Protecting New Orleans is Inconsistent with Louisiana's Master Plan.

The Corps' proposal to destroy almost 250 acres of wetlands within the hurricane protection system in New Orleans yards of fill is inconsistent with the Louisiana's Comprehensive Master Plan for a Sustainable Coast ("Master Plan").[23] The Louisiana Legislature unanimously approved the Master Plan during the 2007 Regular Session. SCR No. 11, 2007 Leg., Reg. Sess. (La. 2007). The Master Plan emphasizes the importance of the wetlands as a fundamental part of the hurricane protection system and states that wetland areas within the hurricane protection system "need to remain intact and undeveloped." *Id*. The Master Plan also states that development in wetlands or areas near the levee footprint "would not only be risky from a safety and economic standpoint, but it would also degrade wetlands and eliminate interior flood storage capacity." *Id*. The Corps' proposed confined disposal facilities and proposed graving site lie within the hurricane protection system. The Master Plan also states that "overall hydrology must be improved by minimizing impediments to water flow." Master Plan at 68. The Corps' plan to destroy almost 250 acres of endangered wetlands within the hurricane protection system is inconsistent with the state's mandate to improve hydrology and minimize impediments to water flow and inconsistent with the unequivocal language of the Master Plan.

D. The Corps Must Provide a Copy of Its Consistency Determination to Louisiana Before Approving the Lock Replacement Project.

Federal law requires the Corps to provide a copy of its consistency determination to Louisiana before approving the lock replacement project. Federal law requires that each Federal agency carrying out an activity in the coastal zone "shall provide a consistency determination to the relevant State agency… at the earliest practicable time, but in no case later than 90 days before final approval of the Federal activity…." 16 U.S.C.A. § 1456(c)(1)(C). The Corps should adopt suggestions from the Louisiana's Department of Natural Resources as to how the lock replacement project should be altered to become consistent with Louisiana's coastal resources program and Master Plan.

VII. THE CORPS MUST INCLUDE THE FINAL COORDINATION REPORT PURSUANT TO THE FISH AND WILDLIFE COORDINATION ACT.

The Corps failed to include the final Fish and Wildlife Coordination Act (FWCA) report in the DSEIS. *See* Kohl Decl. ¶ 17. The U.S. Fish and Wildlife Service states in its August 14, 2008 letter to Louisiana Department of Wildlife and Fisheries, that "the Service is reviewing. . . the proposed disposal plan for contaminated sediments . . . [and] that recommendations will be included in our next Coordination Act Report." DSEIS, App. N at 3. The omission of the final report is significant and should be included in the Final SEIS. *See* Kohl Decl. ¶ 17.

[23] For a copy of the Master Plan, see http://www.lacpra.org/.

VIII. THE REPLACEMENT OF THE INDUSTRIAL CANAL LOCK IS NOT "ECONOMICALLY JUSTIFIED" AND THUS IS NOT AUTHORIZED BY CONGRESS UNDER THE MRGO ENABLING ACT.

The act enabling the replacement of the Industrial Canal Lock is not an act at all, but a portion of the act which authorized the construction of MRGO. *See* 70 Stat. 65. The pertinent part of the act states, "when economically justified by obsolescence of the existing industrial canal lock, or by increased traffic, replacement of the existing lock or an additional lock…is hereby approved…" The existing lock at the Industrial Canal is not economically justified under the act because the old lock is not obsolete and there is no increase in traffic. Even under the enabling act, there are only two situations which allow for the replacement of the Industrial Canal lock, obsolescence and increased traffic, neither of which has occurred.

IX. THE DE-AUTHORIZATION OF MRGO HAS ALSO DE-AUTHORIZED THE LOCK REPLACEMENT.

House Report 110-080 §7013 states that, "[t]he project for navigation, Mississippi River-Gulf outlet, authorized by the Act entitled `An Act to authorize construction of the Mississippi River-Gulf outlet', approved March 29, 1956 (70 Stat. 65), as modified by section 844 of the Water Resources Development Act of 1986 (100 Stat. 4177), is not authorized." The entirety of the enabling act, which is also the enabling act for the lock replacement, is no longer authorized. The de-authorization of the MRGO project also results in the de-authorization of the lock replacement which was authorized by under the MRGO construction project. Without Congressional authorization, the lock replacement project cannot continue.

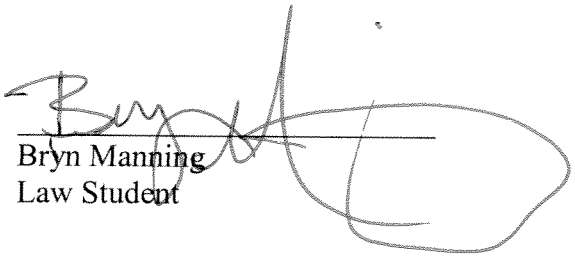
CONCLUSION

Given the serious risks the lock replacement project, as proposed, poses to the surrounding communities and the ecosystem, the Corps' failure to take a hard look at the risks it is asking the local communities to bear,[24] and the lack of economic justification for the lock replacement project, Louisiana Environmental Action Network, Gulf Restoration Network, and the Holy Cross Neighborhood Association urge the Corps to select the no-build alternative and recommend that Congress de-authorize the lock replacement project. Further, because the Corps has not yet complied with NEPA, the Eastern District of Louisiana's injunction stopping the project still stands.

[24] *See* Sulkin Decl. ¶ 35.

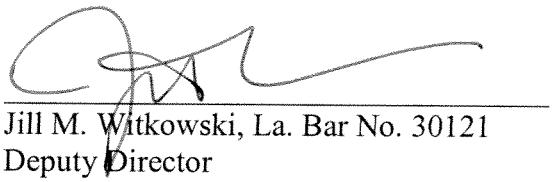
Ref. # 112-004

Prepared by:



Bryn Manning
Law Student

Respectfully Submitted:



Jill M. Witkowski, La. Bar No. 30121
Deputy Director
Tulane Environmental Law Clinic
6329 Freret St.
New Orleans, LA 70118
Tel. (504) 862-8814
Fax (504) 862-8721
e-mail: jwitkows@tulane.edu
Counsel for Louisiana Environmental Action Network, Gulf Restoration Network, and Holy Cross Neighborhood Association