3.0 WRITTEN COMMENTS AND RESPONSES

This section provides the written comments on the LCA DPEIS received by USACE during the comment period. USACE received 82 comment letters on the DPEIS. **Table 3** lists the commentor's organizational affiliation (if any), name of the individual commentor and page number where the comment letter is located. An alphanumeric number is assigned to each comment and its corresponding response. Section 3.1 provides copies of all comment letters received on the DPEIS and responses to these comments, including indication of where the document was modified, if appropriate, in response to these comments. General responses that address multiple comments on particular issues are provided in Section 3.2, and individual comments on these issues are referred to the appropriate general response.

Table 3
Written Comments on LCA DPEIS

Code	Affiliation	Name	Page
DA		Mr. Doug Arceneaux	3-7
BTNEP	Barataria-Terrebonne National Estuary Program	Mr. Kerry St. Pé	3-8
RB		Mr. Robert Boudet	3-13
POC	Cameron Parish Police Jury	Ms. Earnestine T. Horn	3-14
CC		Ms. Cally Chauvin	3-17
NOEA	City of New Orleans Mayor's Office of Environmental Affairs		3-18
CEI-SCLS	Coastal Environments, Inc. for St. Charles Land Syndicate	Mr. Ed Fike	3-23
CEI-LLE	Coastal Environments, Inc. for Louisiana Land and Exploration Co. and Lafourche Reality Co., Inc.	Mr. Sherwood Gagliano	3-25
CREST	Coastal Restoration and Enhancement Through Science and Technology	Dr. Piers Chapman	3-27
CRGSG	Coastal Restoration Group, LLC	Mr. Sherwood Gagliano	3-30
CL&F#1	Continental Land & Fur Co., Inc.	Mr. George Strain	3-34
CL&F#2	Continental Land & Fur Co., Inc.	Mr. George Strain	3-42
TD-EIS		Mr. Tim Dantin	3-45
TD-MR		Mr. Tim Dantin	3-46
LDNR-CRM	Department of Natural Resources, Office of Coastal Restoration and Management	Mr. David W. Frugé	3-47
EJD		Mr. Ed J. Doody	3-49
DORE	Doré Energy, Inc.	Mr. William J. Doré	3-51
DU	Ducks Unlimited	Mr. Ken Babcock	3-52
CE		Mr. Charles Earnest	3-55
GOCA	Governor's Office of Coastal Activities	Ms. Sidney Coffee	3-57

Code	Affiliation	Name	Page
GRN	Gulf Restoration Network	Ms. Vicki E. Murillo and Ms. Cynthia Sarthou	3-63
TMH		Mr. Tim Hebert	3-72
WHH		Dr. William Herke	3-75
HMH - MR		Mr. Harold M. Herrmann	3-80
HMH - EIS		Mr. Harold M. Herrmann	3-84
RLH-EIS		Mr. Ralph L. Herrmann	3-85
RLH-MR		Mr. Ralph L. Herrmann	3-87
HTCC	Houma-Terrebonne Chamber of Commerce	Ms. Kandy Theriot	3-89
CRG	Jefferson County Judge	Honorable Carl R. Griffith, Jr.	3-90
JFP	Jefferson Parish President	Mr. Aaron F. Broussard	3-92
LPG	Lafourche Parish Government	Mr. Jess Curole	3-94
LPBF#1	Lake Pontchartrain Basin Foundation	Mr. Carleton Dufrechou	3-96
LPBF#2	Lake Pontchartrain Basin Foundation	Mr. Carleton Dufrechou	3-98
LWV	League of Women Voters of Louisiana	Ms. Jean Armstrong and Ms. Linda M. Walker	3-99
AUBN	Louisiana Audubon Council	Dr. Barry Kohl	3-102
LCWCRA	Louisiana Coastal Wetlands Conservation and Restoration Authority	Ms. Sidney Coffee	3-108
LDEQ-EA	Louisiana Department of Environmental Quality, Office of Environmental Assessments	Ms. Teri F. Lanoue	3-122
LDEQ-ES	Louisiana Department of Environmental Quality, Office of Environmental Services	Mr. Jim Delahoussaye	3-123
LDEQ-MF	Louisiana Department of Environmental Quality, Office of Management and Finance	Ms. Lisa L. Miller	3-125
KLO	Louisiana House of Representatives	Honorable Kenneth L. Odinet, Sr.	3-127
AWS	Louisiana House of Representatives	Mr. Alfred W. Speer	3-131

Code	Affiliation	Name	Page
LH-EIS	Louisiana Hydroelectric-EIS	Mr. Ralph L. Laukhauf, Jr.	3-136
LH-MR	Louisiana Hydroelectric-Main Report	Mr. Ralph L. Laukhauf, Jr.	3-137
LLA	Louisiana Landowners Association, Inc.	Mr. Michael J. Bourgeois	3-139
LOTF	Louisiana Oyster Task Force	Mr. Ralph V. Pausina and Mr. Mike Voisin	3-150
WJB	Louisiana State Senate	Honorable Walter J. Boasso	3-153
SH	Louisiana State University	Dr. Steven Hall	3-154
LSU	Louisiana State University	Mr. William L. Jenkins	3-155
LWF	Louisiana Wildlife Federation	Mr. E.R. "Smitty" Smith, III	3-156
SGM		Mr. Samuel G. Manisialio	3-160
MRBA-EIS	Mississippi River Basin Alliance - EIS	Mr. Doug Daigle	3-161
MRBA-MR	Mississippi River Basin Alliance – Main Report	Mr. Doug Daigle	3-164
NWF	National Wildlife Federation	Ms. Susan Kaderka	3-170
NRCS	Natural Resources Conservation Service		3-174
NSBA	North Shore Beach Association	Mr. Tommy Raymond	3-222
AJP		Mr. A.J. Planche, Jr.	3-224
PPG	Plaquemine Parish Government	Mr. Benny Rouselle	3-228
PONO	Port of New Orleans	Mr. Gary P. LaGrange	3-231
ROR	Restore or Retreat	Ms. Jennifer B. Armand	3-232
SRA	Sabine River Authority	Mr. Jack Tatum	3-234
SJS		Ms. Sherrill Sagrera	3-238
SCDC	Sierra Club, New Orleans Group, Delta Chapter	Mr. Harvey Stern	3-239
SLLD	South Lafourche Levee District	Mr. Windell A. Curole	3-244
SBPGDA	St. Bernard Parish Government, Coastal Zone Advisory Committee	Mr. David Arceneaux	3-246
SBPCCT	St. Bernard Parish Council	Mr. Craig Taffaro	3-248
SBWF	St. Bernard Wetlands Foundation, Inc.	Mr. Gatien Livaudais	3-250

Code	Affiliation	Name	Page
TCZM	Terrebonne Coastal Zone Management and Restoration Advisory Committee	Mr. Nolan Bergeron	3-252
TLCD	Terrebonne Levee and Conservation District	Mr. Jerome Zeringue	3-261
TPPDS	Terrebonne Parish President	Mr. Don Schwab	3-262
TNC	The Nature Conservancy	Mr. Keith Ouchley	3-263
TCC	Thibodaux Chamber of Commerce	Mr. William J. Barbara and Dr. Allayne Pizzolato	3-268
NMFS-FWS	U.S. Department of Commerce, National Marine Fisheries Service, Southeast Regional Office	Mr. Richard Hartman	3-269
NMFS	U.S. Department of Commerce, National Marine Fisheries Service, Southeast Regional Office	Mr. Richard Hartman	3-270
DOI	U.S. Department of Interior	Dr. Stephen R. Spencer	3-275
DOIS	U.S. Department of Interior, Mineral Management Service	Dr. Stephen R. Spencer	3-336
FHA	U.S. Department of Transportation, Federal Highway Administration	Mr. William A. Sussman	3-352
EPA	U.S. Environmental Protection Agency	Mr. Miguel Flores	3-357
JIV		Mr. Joseph I. Vincent	3-367
WWM#1	Wetlands and Wildlife Management Co.	Mr. Allen Ensminger	3-381
WWM#2	Wetlands and Wildlife Management Co.	Mr. Allen Ensminger	3-385
JAW		Mr. John A. Whittle	3-386
CSW		Ms. Carolyn Shaddock Woosley	3-389

3.1 WRITTEN PUBLIC COMMENTS AND RESPONSES

This section provides copies of all comment letters received on the DPEIS and responses to these comments, including indication of where the document was modified, if appropriate, in response to these comments.

Letter 1: Mr. Doug Arceneaux (DA)

St Bernard mtg - 27 July 04

DRAFT LOUISIANA COASTAL AREA (LCA)
LOUISIANA ECOSYSTEM RESTORATION STUDY
Request for Public Comments

DA 01

Comments: Need To Close MRGO

NAME: DOUG ARCENEAUX
STREET: 2025 PABLO DR
CITY, STATE, ZIP: MOREAUX LA 70074

Affiliation: FISHERMAN
Phone: 277 3635
FAX:

DA 01: Comment noted. See General Response # 1 regarding MRGO.

Letter 2: Mr. Kerry St. Pé, Barataria-Terrebonne National Estuary Program (BTNEP)

Barataria-Terrebonne
NATIONAL ESTUARY PROGRAM

August 16, 2004

Mr. William P. Klein, Jr.
CEMVN-PM-RS/W
P.O. Box 60267
New Orleans, LA 70160-0267

Re: BTNEP Comments on Draft LCA Ecosystem Restoration Study (ERS) and Programmatic Environmental Impact Statement (PEIS)

Dear Mr. Klein,

Enclosed you will find the Barataria-Terrebonne National Estuary Program's (BTNEP) comments on the draft LCA Ecosystem Restoration Study, as read at the LCA Public meeting that was held on August 3, 2004 in Larose, LA

Please accept this document as the **official** comments of the BTNEP.

If we can be of further assistance, please let me know.

Sincerely,

Kerry St. Pé
Program Director

Nicholls State University Campus • P. O. Box 2663 • Thibodaux, LA 70310
(985) 447-0868 • 1-800-259-0869 • Fax: (985) 447-0870 • www.btnep.org

Letter 2: Mr. Kerry St. Pé, Barataria-Terrebonne National Estuary Program (BTNEP)

freshwater diversions, but our plan calls for the maintenance of a gradient of fresh to brackish to saline systems within our region. This is important to our way of life.

BTNEP 01

There must be a **human component** to a successful restoration effort. This is the component that is often overlooked. A restoration plan that has any reasonable chance of being implemented is not one that can be merely engineered or one that is driven *only* by science. Success depends on more than engineering and science. It is imperative to the success of this restoration effort that our communities and our culture be considered. Large-scale, uncontrolled water diversions or any restoration tool that would completely eradicate a way of life for a significant sector of our population would not be in agreement with the BTNEP's stated objectives and goals as expressed in our Comprehensive Management Plan (CCMP).

BTNEP 02

This draft LCA plan proposes a 15,000 cfs diversion at Myrtle Grove. While the BTNEP supports fresh water diversions, we believe that they are protective strategies and have minimal land-building capacity. The Myrtle Grove diversion, if operated at full capacity, has the potential of over-freshening the Barataria Basin, especially if other diversions are operating simultaneously. Public sentiment against radically reduced salinities in the Barataria Basin suggests that the probability that a water diversion of 15,000 cfs would be used at capacity at this Myrtle Grove site is remote, at best. We would rather see a smaller diversion at Myrtle Grove with the savings in construction costs applied to the delivery of slurried sediments at this same location.

Comments on Critical Needs Criteria, and Justification of using sediment slurry delivered through dedicated pipelines under the LCA Near-Term Ecosystem Restoration Plan.

This draft LCA report lists several Critical Needs criteria that were used to prioritize areas needing immediate attention. The BTNEP understands that you are forced to prioritize because the potential funding available to you is much less than the $14 billion we needed to bring our system back to a point where it can sustain our ability to live here. The rest of the nation needs to understand that the $1.9 billion is not enough to ensure that our children and grandchildren will be able to live in this region.

BTNEP 03

The first criterion listed is, "Does the restoration opportunity prevent future land loss where it is predicted to occur?" While the BTNEP agrees that a restoration opportunity should receive additional consideration if it provides protection to existing wetland areas, we cannot agree with how this criterion will be applied. According to this LCA Study this criterion would be used to prioritize projects in only those wetland areas that are predicted to be lost between 2000 and 2050. Since most of the wetland loss that has occurred in Louisiana has been in the Barataria and Terrebonne systems, we cannot agree with your criterion application strategy.

Applying this criterion in the manner you explained indicates that the near-term restoration efforts in Louisiana will emphasize protection rather than actual restoration. We do not agree that protection is the only strategy that is feasible in a near-term restoration effort. Our National Estuary is in desperate need of sediments from "out-of-basin" sources. The emphasis on

BTNEP 01: Protection of vital socio-economic resources is one of the Critical Need Criteria addressed by the LCA near-term plan (critical needs criteria #4). The proposed restoration features in the LCA Plan address the need to maintain flood protection and protect such resources as cultures, communities, infrastructure, business and industry. As represented in the planning objectives of the LCA study, the continued diversity of the coastal ecosystem is the basis for defining successful restoration. However, the achievement of measurable and efficient restoration success, assessed in the LCA Plan modeling effort, requires both temporal and spatial trade offs in terms of ecosystem use. This is not inconsistent with the historic conditions that have occurred throughout the Louisiana coast. The implementation of the LCA Plan and future restoration actions will always consider and attempt to manage the level of tradeoffs across all system functions and uses.

BTNEP 02: The feature identified at the Myrtle Grove location by the LCA Study cost-effective analysis is a 5,000 cfs diversion with dedicated dredging. However, available formulation information indicates that, while 5,000 cfs appears optimal, an upper limit could be 15,000 cfs. The final decision and NEPA documents will require assessment of this range in detail prior to presenting a final construction recommendation. This final decision effort will also involve additional public involvement.

BTNEP 03: The Critical Needs Criteria used to evaluate restoration features are based on the study planning objectives to restore and maintain system function and diversity. The critical needs criteria were developed to identify restoration features that address critical ecosystem needs and functions, and provide system sustainability.

The focus on critical ecosystem needs, implementable actions that can be delivered with current knowledge and technology, and near-term response measures, acknowledges the need to start restoration while additional restoration techniques are developed for future application on larger scales and using new techniques.

Letter 2: Mr. Kerry St. Pé, Barataria-Terrebonne National Estuary Program (BTNEP)

BTNEP 03 (Continued)

"areas of future loss" presumes that there is no feasible restoration tool that can restore lost wetland or barrier shoreline habitats in the near-term. We do not agree with that presumption. We submit that the delivery of "slurried" river sediments through pipelines is a viable restoration tool that is especially suited for restoring shallow open water areas back to wetland habitats.

The BTNEP is a staunch advocate for using an infrastructure of newly constructed pipelines to deliver bed load sediment slurry into our system. We believe that this technique should be at the top of the restoration "tool chest" as one of the very few available that can be used to create wetlands from open water areas. Dedicated dredging is supported by our CCMP, and represents one of the few meaningful restoration tools available that would be publicly acceptable. We believe that this technique could be effectively used to bring sediments into the Barataria-Terrebonne system from annual deposits in the Atchafalaya and Mississippi rivers as well as from potential offshore sources.

We do not agree with your assessment that there is insufficient scientific and engineering understanding of Pipeline Sediment Delivery to consider it as a viable near-term restoration tool. We believe that there is sufficient scientific and engineering knowledge of this technique to use it confidently in the near-term on a large scale.

There is strong scientific evidence indicating highly productive ecological responses in saline marsh habitats where large quantities of mineral sediments have been introduced. In a 1998 paper by Irv Mendelssohn and Nathan Kuhn of LSU, it was concluded that plant height and cover were greater with increasing sediment deposition.

Additional scientific evidence in support of using dedicated dredging to create functional wetland habitats (at a cost of $0.96 per cubic yd.) is being obtained as a result of two projects at Port Fourchon supported by BTNEP in collaboration with the NRCS, the LSU Ag Center, and the Greater Lafourche Port Commission. These projects involve the collection of a suite of soil physical and chemical parameters as well as vegetative trials with various plant species placed in plots of varying elevation and soil types.

We submit that there is sufficient scientific evidence to indicate that Pipeline Sediment Delivery is a viable restoration tool and, frankly, is one of the few that could be effectively used to reverse the current marsh to open-water trend. Pipeline Sediment Delivery will build marsh, not merely provide protection of what we have left. Furthermore, we believe that we know as much about sediment addition impacts to coastal ecosystems as we know about freshwater

BTNEP 03 (Continued): Critical Needs Criterion #1 does expressly state that restoration features should prevent future land loss. This criterion is based on the goal of the program to address wetland loss and coastal erosion that will continue to result in land loss and potential loss of long-term restoration opportunity, and reflects the policy goal to stabilize current conditions where possible, while developing longer-term and larger-scale actions that can be implemented in the future. Additionally it is not coincidental that areas of projected future loss coincide with areas of past loss. In addressing future loss there is some certainty of addressing some portion of the past loss.

The application of sorting criteria in the development of the LCA Plan resulted in the identification of a technical uncertainty regarding source material for multiple sediment delivery projects. The study team determined that the delivery of sediment to the coastal ecosystem should rely on renewable sources such as the Mississippi River or at least sources outside the system. Because there are potential limitations on the quantity as well as rates of delivery and renewal for these sources, the execution of multiple sediment delivery projects would need to be approached in a programmatic manner. The risk being considered is that initiation of one, or multiple projects, will have a long-term ability to initiate subsequent projects. In this regard, additional assessment of the most critical needs is required.

While small scale research and demonstration projects have shown that sediment transport by pipeline and delivery to marsh environments can raise elevations and promote productivity, engineering processes and hydrologic and ecologic modeling techniques needed to design and implement these projects on a scale that would be significant to overall restoration efforts require additional investigation. Some of these issues could be addressed by demonstration projects and research conducted under the S&T Program.

Letter 2: Mr. Kerry St. Pé, Barataria-Terrebonne National Estuary Program (BTNEP)

BTNEP 03 (Continued)

diversion impacts. The essential and critical difference between the two directly addresses the question of sustainability. Adding freshwater will protect the marshes we have now and what we have now is not enough to allow for a sustainable, human ecosystem. The system is at the verge of complete collapse now. To use a strategy that merely maintains what is left assures a near-term population relocation program not a near-term restoration program. Unless there is a net increase in the area covered by barrier island and wetland habitats within the next 10 years, we most assuredly cannot sustain the communities of our National Estuary. Simply stated, a strategy of mere protection is not good enough and is patently unacceptable to the people of the Barataria-Terrebonne National Estuary.

Pipeline Sediment Delivery mimics deltaic processes by re-introducing enough sediment to provide significant restoration. One advantage of this concept is that it can build a marsh-level platform on which vegetation can grow, and the magnitude of impacts upon salinity gradients can be regulated. Pipeline Sediment Delivery could be combined with small and medium freshwater diversions to re-build marshes and maintain publicly acceptable salinity regimes. Because Pipeline Sediment Delivery would allow for a moveable discharge site from which sediment could be released it can also be used to restore or repair the critical system of remnant distributary ridges. These ridges provide protection for adjacent marshes.

For freshwater diversions alone to have the effect of building ridges, the volume of flow would necessarily have to be so large that the resulting negative impacts on receiving system salinity regimes would be totally unacceptable to the public and would not be consistent with our CCMP.

Once portions of our system are restored with the sediments we need, smaller diversions from our river systems could be used to maintain a fresh, brackish, and saline gradient that preserves enough of our biological diversity to maintain the way of life to which our people have become accustomed.

The sediment bed loads from the Atchafalaya and Mississippi rivers or from other out-of-basin sources can be transported through pipelines directly to degraded marshes adjacent to hurricane protection systems, or to submerged shoals where barrier islands once existed, or to degraded ridges. These coastal features cannot feasibly be restored with any other method in our existing "tool box."

Pipeline Sediment Delivery uses known dredging technology and could be added to existing dredging activity. The Mississippi and Atchafalaya rivers must be dredged periodically to allow for navigation. It is more than ironic that the coastal systems that are degrading most rapidly are nearest to the potential solution. An infrastructure of pipes and booster pumps would allow for the efficient use of these resources.

In the opinion of BTNEP, incorporating the Pipeline Sediment Delivery concept in this restoration effort is realistically the only way that our system can be restored. In the near-term, it is the only publicly tolerable sediment transporting technique that could possibly be used to rebuild lost wetlands.

BTNEP 03 (Continued): The river management modeling effort proposed as a first step for several of the large-scale studies would need to be completed and a best use policy may need to be established in conjunction with the results of that study.

While it is the long-term goal of the LCA Plan to restore lost habitat, fundamental limitations, such as funding, source material, and time, have indicated the need to develop a more programmatic application. The proposed Myrtle Grove diversion feature will incorporate diversion and sediment delivery in the near-term and provide additional insight into coordinating these restoration techniques. Additionally, methodologies for sediment delivery via pipeline will also be addressed by demonstration projects through the S&T Program and improved upon to increase their reliability and effectiveness for future restoration efforts.

Letter 2: Mr. Kerry St. Pé, Barataria-Terrebonne National Estuary Program (BTNEP)

While we are pleased to see the pipeline sediment delivery concept in this draft plan, we respectfully urge you to incorporate this concept at a higher level than proposed. Furthermore, the restoration effort represented in this plan will not be enough to sustain our existing communities. This LCA Plan represents a very small beginning at restoring our system. We must all acknowledge that the level of effort proposed in this plan is not enough to ensure that our communities and our way of life will be here for our children and our grand children. That's the message that the rest of the nation needs to clearly hear. It is simply not enough.

Kerry M. St. Pé

Kerry M. St. Pé, Program Director
Barataria-Terrebonne National Estuary Program

Letter 3: Mr. Robert Boudet (RB)

8/19/2004

Robert Boudet
111 Junior Lane
Myrtle Grove, La 70083
504-656-8334

USACE/CEMVN-PM-C
P.O. Box 60267
New Orleans, La 70160-0267

Attn: Mr. Tim Axtman

Subject: Proposed Myrtle Grove diversion project

RB 01

As a resident of Myrtle Grove Marina Estates and a long time fisherman and hunter in this area, I am certainly aware of the importance of coastal restoration, however I am not in favor of a project that will drastically change the ecology and life style of this area as a 15 cfs diversion will certainly do. Smaller diversions along with pumping sediment by pipeline from the Mississippi River would be more effective, less expensive, and have a lot less impact on our area. Phase I of Myrtle Grove Marina Estates, one hundred and thirty-seven water front lots were sold almost immediately after going on the market. There are presently 25 homes either under construction or already completed in Phase I. Another one hundred and forty-four lots, Phase II, is well on its way of being completed. In a couple of years we will have 281 occupants.

I have a front row seat from my porch witnessing the construction of Phase II. I was absolutely amazed at how much sand could be carried through a 20" pipeline in such a short period of time. A three or four mile pipeline was assembled, the sand was pumped, then the pipeline was disassembled. All was done in 90 days. I was told it could have been completed in 45 days if not delayed by high water in the river. At this rate, an island bigger than Grand Isle could be built in less than a year. I am having a hard time believing that this system couldn't play a major part in Coastal Restoration.

English Turn, the posh golf course/residential development in Orleans Parish was also constructed with piped in Mississippi River sand. If the private sector can develop land using this system and sell the land for a profit, it must be a financially efficient system.

Robert Boudet

RB 01: The feature identified at the Myrtle Grove location by the LCA Study cost-effective analysis is a 5,000 cfs diversion with dedicated dredging. However, available formulation information indicates that, while 5,000 cfs appears optimal, an upper limit could be 15,000 cfs. The final decision and NEPA documents will require assessment of this range in detail prior to presenting a final construction recommendation. This final decision effort will also involve additional public involvement.

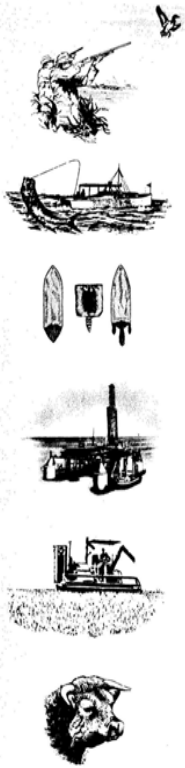
Dedicated dredging to restore/create marsh is a key part of the proposed feature, but is not considered sustainable in and of itself. The larger application of sediment delivery for land building was considered in multiple features for the LCA Plan. However, the application of sorting criteria in the development of the LCA Plan resulted in the identification of a technical uncertainty regarding source material. The study team determined that the delivery of sediment to the coastal ecosystem should rely on renewable sources such as the Mississippi River or at least sources outside the system. Because there are potential limitations on the quantity and rates of renewal for these sources, the execution of multiple sediment delivery projects would need to be approached in a programmatic manner. The river management modeling effort proposed as a first step for several of the large-scale studies would need to be completed and a best use policy may need to be established in conjunction with the results of that study. The key to applications of direct wetland building as a restoration tool will be the effective minimization of cost. This is not the case when land is being created for development and profit is expected to offset cost.

Letter 4: Ms. Earnestine T. Horn, Cameron Parish Police Jury (POC)

STEVE TRAHAN
PRESIDENT
SCOTT TRAHAN
VICE PRESIDENT
EARNESTINE T. HORN
ADMINISTRATOR
BONNIE W. CONNER
SECRETARY-TREASURER

POLICE JURY
PARISH OF CAMERON
P. O. BOX 366
CAMERON, LOUISIANA 70631
(337) 775-5718
(337) 775-5567 Fax
cppjury@camtel.net

DISTRICT 1 MAGNUS "SONNY" McGEE
DISTRICT 2 STEVE TRAHAN
DISTRICT 3 CHARLES PRECHT III
DISTRICT 4 DOUANE CONNER
DISTRICT 5 SCOTT TRAHAN
DISTRICT 6 JAMES DOXEY
DISTRICT 7 DARRYL FARQUE



August 17, 2004

Tim Axtman
U. S. Army Corps of Engineers
Planning, Programs and Project Management Division
Environmental Planning & Compliance branch
CEMVN-PM-C
P. O Box 60267
New Orleans, LA 70160-0267

Re: Comments on the Draft Louisiana Coastal Area – Ecosystem Restoration Study

Dear Mr. Axtman:

POC 01 The Cameron Parish Police Jury cannot understand why there are no proposed shoreline protection projects in Southwest Louisiana, (Region 4), included in the LCA Report. All fifteen restoration projects included in the draft report are located in the eastern portion of the State.

The police jury recognizes the problems in the eastern part of the State and sympathizes with the residents and property owners in Southeast Louisiana, but the western part of the State is losing land also.

Million dollar CWPPRA Projects, re-building barrier islands, have been totally lost in Southeast Louisiana. Dollars have gone down the drain. Yet all the projects in the LCA Report are located there. Cameron and Calcasieu Parishes have had very successful CWPPRA Projects. POC 02

It is very hard to re-build barrier islands. We are the barrier island for Calcasieu Parish. Once Cameron Parish is lost the shoreline of the Gulf of Mexico will be in Calcasieu Parish.

We must protect our precious estuaries for waterfowl, wildlife and fisheries. We must protect our State and National Refuge Systems. We cannot re-build Cameron Parish. We must protect it.

THE HEART OF SPORTSMAN'S PARADISE

POC 01: Please see General Response #11 regarding LCA restoration efforts in Subprovince 4.

POC 02: Because of the technical uncertainties associated with barrier island restoration, the LCA Plan includes demonstration projects as part of the S&T Program. These projects will provide insight into the processes needed for design and implementation of barrier island restoration.

Letter 4: Ms. Earnestine T. Horn, Cameron Parish Police Jury (POC)

Page 2
Draft Louisiana Coastal Area
Tim Axtman, U. S. Army Corps of Engineers

POC 03 Please consider including Southwest Louisiana in the LCA Report.

Sincerely,

Earnestine T. Horn

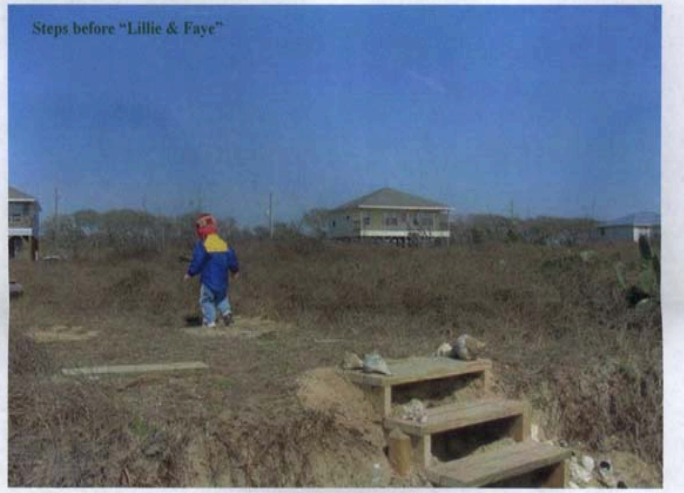
Earnestine T. Horn, Parish Administrator
CAMERON PARISH POLICE JURY

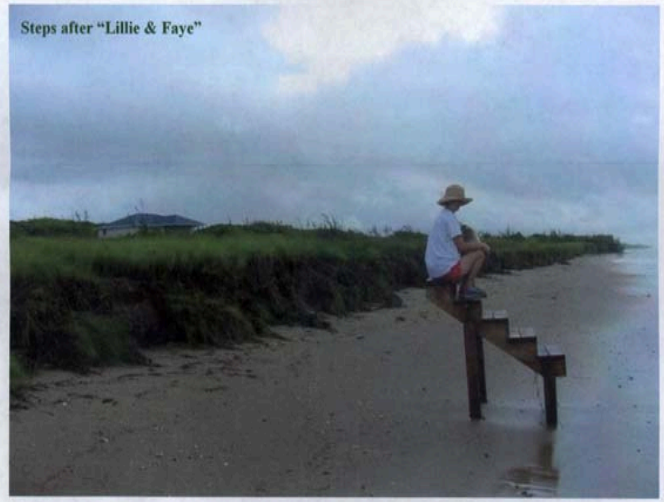
Enclosure

CC: Governor Kathleen Blanco
Scott Angelle, DNR Secretary
Representative Chris John
Senator John Breaux
Senator Mary Landrieu
The SW Louisiana Legislative Delegation
Mark McMurry, Calcasieu Parish Police Jury

POC 03: Please see General Response #11 regarding the number of proposed features in Subprovince 4.

Letter 4: Ms. Earnestine Horn, Cameron Parish Police Jury (POC)





Letter 5: Ms. Cally Chauvin (CC)

DRAFT LOUISIANA COASTAL AREA (LCA)
LOUISIANA ECOSYSTEM RESTORATION STUDY
Request for Public Comments

CC 01

Comments: Please involve educators in helping to present information to the public. I would love to be involved in helping to educate the public.

NAME: Cally Chauvin
STREET: 102 Ursula Street
CITY, STATE, ZIP: Raceland, LA. 70394
Cellphone: (985) 790-1346

Affiliation: Laf. Par. Sch. Bd. (Teacher) Lockport Middle School
Phone: (985) 532-5219
FAX:

LAROSE MTNG

CC 01: Due to the strategic and long-term nature of the proposed LCA Plan, the USACE intends to include many different interested parties, including educators, in our public involvement program.

Future outreach strategies include the involvement of educators through workshops, interactive CD-ROMs, and a web site devoted to school-age children. Information will be provided periodically via a mailed newsletter and through the Breaux Act Newsflash. For additional information, contact Julie Morgan, Outreach Program Specialist for the Coastal Restoration Branch of the USACE New Orleans District, at (504) 862-2587.

Letter 6: City of New Orleans Mayor's Office of Environmental Affairs (NOEA)

CITY OF NEW ORLEANS
MAYOR'S OFFICE OF ENVIRONMENTAL AFFAIRS

August 23, 2004

Dr. William P. Klein
U.S. Army Corps of Engineers
Planning, Programs and Project Management Division
Environmental Planning and Compliance Branch
CEMVN-PM-RS
P.O. Box 60267
New Orleans, LA 70160-0267

COMMENTS ON THE LOUISIANA COASTAL AREA STUDY AND DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

INTRODUCTION

The City of New Orleans, Mayor's Office of Environmental Affairs has reviewed both Volume 1 and Volume 2 reports written for the Louisiana Coastal Area (LCA). Upon review, Environmental Affairs supports the majority of the proposed activities of the LCA plan, which aims to implement coastal restoration projects in the near and long terms. This office has concerns and questions related to the Mississippi River Gulf Outlet (MRGO), pipeline canal restoration, beneficial dredge material usage and potential water quality impacts. Environmental Affairs has also addressed coordination between LCA projects and the local Coastal Management Program. In conjunction with recommendations, this office is providing its concerns, questions and comments during the comment period for the LCA plan.

MRGO

NOEA 01

Volume One, *Draft Study Report*, and Volume Two, *Draft Programmatic Environmental Impact Statement* (PEIS) address the problems faced by the Louisiana coast. Some of the major influences on coastal land loss are navigational channels including the MRGO. According to the report, "Each of these navigation channels introduces and/or compounds marine influences in many of the coastal wetlands and water bodies" (Volume 1: Section 2.2.1.1.1.). Stated in the PEIS, the construction of canals for navigation has changed the internal hydrology of estuaries and wetlands. Clearly stated in Volume 2: Section 1.5.2.5, canals from the Gulf and the ship traffic associated with the canals cause erosion and greater impacts from storms. Along with the wakes of ship traffic, wetland erosion is caused in part by the intrusion of more salt laden waters. Saltwater Intrusion is the most influential element of turning freshwater marsh into saline marsh, and may lead to creating more open water (Volume 2).

1300 PERDIDO STREET | STE. 8E06 | NEW ORLEANS, LOUISIANA 70112
565-8115 | 565-6589 FAX

NOEA 01: Construction of gated structures on the MRGO, closure and other features are currently being considered in a separate study, the results of which would be considered during implementation of the LCA Plan. Please also see General Response #1 regarding the proposed MRGO Restoration Feature.

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NOEA 01 (Continued)

Volume 2 addresses the needs, problems and potential solutions to the impacts of the MRGO channel. This information implies more of a need to reduce the negative impacts of ocean going ships utilizing the outlet, such as saltwater intrusion and wave action, than to simply construct rock dikes and use beneficial dredge material. This implication is assumed due to the following stated impacts of maintaining the current operations of the MRGO:

- "significant habitat shifts occurred because the impacted area converted to a higher salinity system";
- "continued operation of the MRGO results in high rates of shoreline erosion from ship wakes, which destroy wetlands and threatens the integrity of the Lake Borgne shoreline and adjacent communities, infrastructure, and cultural resources";
- "severe erosion of the MRGO channel continues to facilitate the transition of the upper Pontchartrain Basin estuary toward a more saline system";
- annual erosion rates "result in the direct loss of approximately 100 acres of shoreline brackish marsh every year and additional losses of interior wetlands and shallow ponds as a result of high tidal ranges and rapid water exchange"; and
- these habitats are "important for estuarine biological resources and serve as critical habitat for the threatened Gulf sturgeon" (Volume 2: Section 2).

These impacts dictate a need to examine alternative solutions to the current problems presented by deep draft ships utilizing the MRGO. It is also assumed based on the report's statement that, "Rapid action is required to protect the integrity of the southern Lake Borgne shoreline and to prevent continued erosion of the MRGO channel banks from ocean going vessel wakes. Without action, critical landscape components that make up the estuary would be lost and future efforts to restore other parts of the ecosystem would be much more difficult and expensive" (Volume 2).

Alternative solutions include installation of a lock where rock dikes are proposed. A lock would buffer the wave action of incoming ocean-going vessels, as well as limit the amount of salt water allowed to enter the wetland system. The Office of Environmental Affairs suggests that the final Programmatic Environmental Impact Statement explore various options of projects intended to maintain the integrity of the wetland systems that currently protect Orleans and St. Bernard Parishes from storm surge and other weather-related risks to human health and the environment.

NOEA 02

As well as the conditions of the natural environment, the health, safety and welfare of New Orleans residents is of major concern to Environmental Affairs. The loss of wetlands along the MRGO has decreased the barrier between storm surges and our population. In Volume 2, it is reported that if evacuation routes become impassible people will be trapped. Interstate 10 East, from New Orleans to Slidell could be

1300 PERDIDO STREET | STE. 8E06 | NEW ORLEANS, LOUISIANA 70112
565-8115 | 565-6589 FAX

NOEA 02: Comment noted. For additional information, please see General Response #1 regarding the proposed MRGO Restoration Feature.

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NOEA 02 (Continued)

impacted by keeping the MRGO open (Volume 2). Without action, the Orleans and St. Bernard residents in the area become more and more susceptible to disaster related to storm waters (Volume 2).

NOEA 03

To solve the problems of the MRGO the LCA team devised the Tentatively Selected Plan (TSP), which specifically addresses coastal land loss, and human and natural ecological needs by proposing five, near-term restoration projects. One of the projects is called "MRGO Restoration Features". This project is said to have the potential to prevent future wetland loss and restore degraded wetlands; stabilize and restore the endangered geomorphic structure of the lake rim; and protect important socio-economic resources, including development near the MRGO and the Gulf Intracoastal Water Way (Volume 2: Section 3.5.1.1.). While it is impressive that work on the MRGO seems to be a primary goal, the activities to address MRGO impacts are troubling, and in Environmental Affairs' opinion are not meeting the critical needs of the human and natural environment.

Rock dikes may have worked in certain locations along the MRGO (although no studies were referenced), but generally the channel is too deep to sustain rock dikes. In coastal management, construction of bulkheads and rock dikes are minimized. Instead of absorbing the erosive powers of waves, hard surfaces of bulkheads and dikes, typified by rocks only redirect wave energy. Wave action is simply deflected elsewhere as opposed to absorbing that energy and stopping it from impacting wetlands. In Volume 2, under "Lessons Learned and Opportunities for the LCA Study", although there have been numerous rock dike projects, rock dikes were not listed as an opportunity. Environmental Affairs recommends that when planning dike projects, use more advanced materials than rocks such as coconut logs.

NOEA 04

PIPELINES

Environmental Affairs has a question regarding pipeline canal restoration using different methods under "Science & Technology Program Demonstration Projects". Have the oil and gas companies, who are at least partially responsible for this damage been approached for monetary assistance? Environmental Affairs recommends that the match required for these projects be met by oil and gas companies that have worked in and profited from Louisiana's coastal regions.

NOEA 05

BENEFICIAL DREDGE

One of the seven TSP components is "Beneficial Use of Dredged Material". Environmental Affairs has a question related to this component. The report provided a dredged material figure of 70 myc per year, and stated that much of it is unusable due to re-suspension and hopper dredged material. The report found that 30 myc per year is already beneficially utilized. If this so, then why try to increase this program? How much of the remaining 40 myc per year is available for beneficial use? Please address this in the final draft of the Environmental Impact Statement (EIS).

1300 PERDIDO STREET | STE. 8E06 | NEW ORLEANS, LOUISIANA 70112
565-8115 | 565-6589 FAX

NOEA 03: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

NOEA 04: Generally, oil and gas access channels were constructed within the existing legal framework regulating planning, construction, O&M, and removal/abandonment of such structures. Accordingly, all impacts were assessed and, if necessary, mitigated for during the permitting process for canals dredged after permitting requirements were placed in effect. Typically the requirement of closure does not include back filling and does not consider failure of the landscape around a constructed closure. Additional funding from private interests for pipeline canal restoration would come in the form of additional regulatory requirements or cooperative agreements to support restoration. Recommendation of statutory or regulatory changes would be outside the scope of this document. The potential for establishment of agreements, including funding contributions, in support of the restoration effort may be possible and would be in the perview of the state or local cost share sponsor.

NOEA 05: The issue of increased beneficial use involves not only maximum use of available material but also the use of material for critical need applications. The expansion of the beneficial use authority may also involve expanding the spatial extent over which material may be placed. Currently, of the 70-90 mcy of dredged material removed annually during routine maintenance of Federally-authorized navigation channels, the USACE, New Orleans District, uses 25 percent-35 percent beneficially for wetland creation and/or restoration; creation and maintenance of islands for colonial nesting seabirds; restoration of barrier islands; bank stabilization; wetland nourishment; and shoreline nourishment. Approximately 30 mcy of dredged material is removed annually from the bar channel of the MRGO, LA, project; Head of Passes and Southwest Pass of the Mississippi River, Baton Rouge to the Gulf of Mexico, LA, project; the bar channel of the Atchafalaya River and Bayous Chene, Boeuf and Black, LA, project; and the inland reaches of the Calcasieu River and Pass, LA projects are available for beneficial uses.

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WATER QUALITY ISSUES
Water quality of diversion projects must be addressed as part of this evaluation process.

NOEA 06

Environmental Affairs found two critical pieces of information that need clarity regarding water quality issues and the LCA restoration plan. First, what is methylation, and how will the team plan for potential methylation (Volume 2: Section 4.14)? Environmental Affairs suggests that the final draft of the EIS answer these questions.

NOEA 07

Second, the report offers adaptive management as a method to address many potential pollution problems such as the "spring flush" of agrochemicals into the Mississippi and Atchafalaya basins. What is adaptive management (Volume 2)? Environmental Affairs suggests that when offered as a method to solve a potential pollution problem, provide an example of an adaptive management technique.

COORDINATION WITH COASTAL MANAGEMENT PROGRAM

NOEA 08

Environmental Affairs conducts the City of New Orleans, Coastal Management Program, which includes regulating local concern, Coastal Use Permit applications. If the LCA plan is implemented, the local program will consider potential LCA project impacts due to permitted wetland activities, just as we have considered impacts on CWPPRA projects and critical habitats. Our program would encourage sharing LCA science tools to evaluate the effects of development in coastal areas (Volume 2: Section 6.2). Environmental Affairs feels however, that it would be necessary to provide some training appropriate to the evaluation tools available to the local programs.

In Section 6.2.4.1.4 the report offers potential overlapping of LCA plan project monitoring with mitigation area monitoring. Our program would be in favor of such coordination.

CONCLUSION

NOEA 09

Because "delaying action would result in a 'loss of opportunity' to achieve restoration" and/or increase costs of future efforts, the City of New Orleans, Mayor's Office of Environmental Affairs supports the LCA plan with the condition that our recommendations put forth in this document be seriously considered. Such projects as the Myrtle Grove diversion and dedicated dredging, provides hope against statistics like the prediction in 50 years that 40% of intermediate and 100% of saline and brackish marsh in parts of the Barataria Basin will be gone without restoration actions.

Based on both human and natural environmental health and vitality, Environmental Affairs recommends consideration of alternatives other than rock dikes to address the problems created by deep draft shipping on the MRGO. With a reported $80 million investment in MRGO restoration features, it only makes sense to stop address the causes

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565-8115 | 565-6589 FAX

NOEA 06: Concur. A brief discussion on methylation of mercury has been added to Section 4.

NOEA 07: Adaptive management is defined in the glossary of the LCA Plan and FPEIS. In addition, adaptive management is discussed in Section 4 of the Main Report, Section 2 of the FPEIS, and in detail in Appendix A.

In the FPEIS, Section 4, the discussion on the input of agrochemicals, know as the spring flush, and mention of using adaptive may have been misinterpreted. Adaptive management is a process (not technique) and is designed to address scientific uncertainties and support the incorporation of the best available science into the decision making process. Appendix A details how adaptive management will be used to support decisions necessary to implement the LCA Plan. Adaptive management applies to operations and maintenance, which can have significant effects on ecosystem response. Agrochemicals are only one element of concern when implementing adaptive management, and the LCA Plan will be implemented consistent with the Hypoxia Action Plan.

NOEA 08: Comments noted.

NOEA 09: Comments noted. Please see the appropriate responses above.

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NOEA 09 (Continued)

of continual erosion. The future without-project conditions for the area, also known as "no action", forecast a continued trend of land loss and an associated decline in environmental and economic sustainability (Volume 1: Section 2.2).

Environmental Affairs recommendations and needs are recapped as follow:

- Consider alternative solutions to the problems presented by the use of the MRGO by deep draft ships.
- Consider using more advanced stabilization materials than rocks such as coconut logs for dike projects.
- Require a match from oil and gas companies to restore pipeline canals.
- Address the question, how much of the remaining 40 myc per year is available for beneficial use?
- Define methylation, and how will the team plan for potential methylation?
- Define adaptive management, and provide an example of an adaptive management technique.
- Accept encouragement in sharing LCA science tools to evaluate the effects of development in coastal areas, but consider that training will be necessary to implement the tools available.
- Accept encouragement in overlapping of LCA plan project monitoring with mitigation area monitoring.

Besides the issues discussed previously, the LCA plan must be implemented. On behalf of the citizens of New Orleans and the region, our current commercial fishing, oil and gas and tourism livelihoods are at stake, along with potential employment in coastal restoration. From an economic development standpoint the Louisiana coast stands to lose so much so as to incur a depression in our local economy, which will without doubt have an effect on the national economy as well.

NOEA 10

In closing, Environmental Affairs encourages the LCA process to remain in the public eye. We feel that the best way to keep the public knowledgeable and engaged in this process is to consistently link the LCA to *Coast 2050*, a plan reflecting the public's vision.

1300 PERDIDO STREET | STE. 8E06 | NEW ORLEANS, LOUISIANA 70112
565-8115 | 565-6589 FAX

NOEA 10: Please see General Response #7 regarding the relationship between Coast 2050 and LCA.

Letter 7: Mr. Ed Fike, Coastal Environments, Inc. for St. Charles Land Syndicate (CEI-SCLS)

Coastal Environments, Incorporated

Services:

Applied Science & Planning

Environmental Restoration & Monitoring

Cultural Resources Management

Geographic Information Systems

Litigation Support

Website:

www.coastalenv.com

Corporate Office:

1260 Main Street
Baton Rouge, LA 70802
Ph (225) 383-7455
F (225) 383-7925
cei@coastalenv.com

Other Locations:

Route 6, Box 466
Appomattox, VA 34522
Ph/F (434) 233-6197
cpear2@gte.net

525 Carancahua Street S.
Corpus Christi, TX 78401
Ph (361) 854-4885
F (361) 854-4815
ricklis@coastalenv.com

1900 E. Beach Boulevard
Gulfport, MS 39501
Ph (228) 822-9914
F (228) 822-9915
gcarbo@coastalenv.com

302 Saint John Street
Madisonville, LA 70447
Ph/F (985) 845-2879
mgagliano@coastalenv.com

August 23, 2004

U. S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

Attention: Mr, Tim Axtman
CEMVN-PM-C

RE: Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study

Gentlemen:

This correspondence is respectfully submitted on behalf of St. Charles Land Syndicate (SCLS), owners of approximately 12,141 acres of wetlands in St. Charles Parish, Louisiana. As landowners of the largely undeveloped tract of land, that is adjacent to urbanized Jefferson, the SCLS is desirous of developing portions of the property and conserving the remainder as evidenced in permit applications on file in your office (LMNOD-SE 156, LMNOD-SE 449, EM-20-020-0969, EB-20-020-3367, and MVN 2004-2805 EDD). CEI-SCLS 01

The SCLS is very concerned about the continued loss of its property that has been directly attributable to saltwater intrusion and tidal energies. We are very supportive of actions that would significantly reduce high salinity regimes in Lake Pontchartrain resulting from the IHNC and MRGO. Specifically, we are in full support of the gated closure of the MRGO.

We are also asking the Corps to re-examine the use of the Bonnet Carre as a freshwater diversion project. The spillway represents a resource that should be utilized as part of any comprehensive plan the state adopts in addressing coastal protection and sustainability. The spillway is currently owned by the Corps which would negate most real estate considerations. Moreover, the State of Mississippi has shown support for the project in the CEI-SCLS 02

CEI-SCLS 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

CEI-SCLS 02: Use of the existing authorized Bonnet Carre Spillway Project as a freshwater diversion was considered during the LCA Plan formulation process. As outlined in the Plan Formulation section of the LCA Plan, the opportunistic use of the Bonnet Carre Spillway was eliminated because there were scientific or technical uncertainties related to nutrient management and feature operation that had to be solved before the project could be implemented. As such, the PDT determined that this project feature was too complex to have feasibility level decision documents complete and construction begun within the next five to ten years of plan implementation. Please see Section 3 off the Main Report for further information on the description and elimination of the Bonnet Carre Spillway Project Feature. Ongoing work under the CWPPRA program is evaluating nutrient budgets and operational requirements to prevent adverse effects such as algal blooms in Lake Pontchartrain.

Letter 7: Mr. Ed Fike, Coastal Environments, Inc. for St. Charles Land Syndicate (CEI-SCLS)

CEI-SCLS 02 (Continued)

past and expressed interest in helping Louisiana with the local matching fund requirement.

CEI-SCLS 03

The SCLS would also be very receptive to the stabilization of the unprotected portion of shoreline along the lake.

We appreciate the opportunity to make these comments.

Sincerely yours,

Ed Fike
Agent for SCLS

xc: SCLS

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CEI-SCLS 03: Comment noted.

Letter 8: Mr. Sherwood Gagliano, Coastal Environments, Inc. for Louisiana Land and Exploration Co. and Lafourche Reality Co., Inc. (CEI-LLE)

Coastal Environments, Incorporated

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Website:

www.coastalenv.com

Corporate Office:

1260 Main Street
Baton Rouge, LA 70802
Ph (225) 383-7455
F (225) 383-7925
cei@coastalenv.com

Other Locations:

Route 6, Box 466
Appomattox, VA 34522
Ph/F (434) 233-6197
cpear2@gte.net

525 Carancahua Street S.
Corpus Christi, TX 78401
Ph (361) 854-4885
F (361) 854-4815
ricklis@coastalenv.com

1900 E. Beach Boulevard
Gulfport, MS 39501
Ph (228) 822-9914
F (228) 822-9915
gcarbo@coastalenv.com

302 Saint John Street
Madisonville, LA 70447
Ph/F (985) 845-2879
mgagliano@coastalenv.com

U. S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

Attention: Mr. Tim Axtman
CEMVN-PM-C

RE: Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study

Gentlemen:

This correspondence is respectfully submitted on behalf of Louisiana Land and Exploration Co. (LL&E) and Lafourche Realty Co. Inc., (Lafourche Realty) owners of many large tracts of land in Lafourche Parish, LA. As landowners of these undeveloped tracts of land, that are immediately south of Golden Meadow, the landowners nominated a marsh barrier project at the February 12, 2004 CWPPRA Regional Planning Meeting in New Orleans. The land in question is a highly productive estuarine area that has become increasingly subject to water movement resulting in marsh loss and deterioration.

The marsh barrier project (as shown in Figure 1) would be an excellent second line of defense against storm surge in the Terrebonne and Barataria Area as well as stabilizing the hydrology of the system while allowing controlled thru-flow of sediment enriched water derived from Bayou Lafourche via the Tidewater canal. This defense and sediment enrichment would not preclude the similar benefits to be provided in the future by the Third Delta Conveyance Channel Project.

LL&E and Lafourche Realty are concerned about the continued loss of property that has been directly attributable to saltwater intrusion and tidal energies. There is little distance from these properties to the populated city of Golden Meadow and additional storm surge protection of this area is definitely warranted. We are very supportive of actions that would significantly reduce wave action and increased salinities within this watershed and believe that the project we proposed at the CWPPRA meeting would perform these functions.

We are also asking that the Corps re-examine this project and consider other possible projects within this area. The Barataria/Terrebonne basin represents a resource that should be utilized as part of any comprehensive plan the state adopts in addressing coastal protection and sustainability.

We appreciate the opportunity to make these comments.

Sincerely yours,

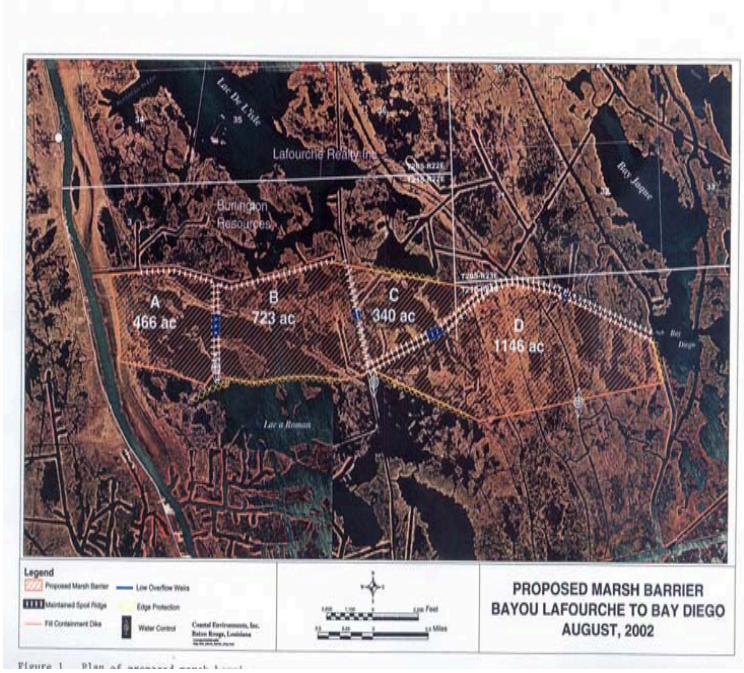
Sherwood M. Gagliano, PhD
President, Coastal Environments, Inc.
Agent for Lafourche Realty, Co. Inc.

CEI-LLE 01

CEI-LLE 01: The proposed project for a marsh barrier from Bayou La Fourche to Bay Diego was not considered during development of the sub-province frameworks because the initial Plan Formulation process was completed prior to February 2004, when the CWPPRA Regional Planning Meeting was held, and there was not sufficient information available on this proposal feature during the plan.

The plan will be updated under future LCA authorizations, and these updates may include addition of restoration features that meet critical needs for ecological restoration.

Letter 8: Mr. Sherwood Gagliano, Coastal Environments, Inc. for Louisiana Land and Exploration Co. and Lafourche Reality Co., Inc. (CEI-LLE)



Letter 9: Dr. Piers Chapman, Coastal Restoration and Enhancement Through Science and Technology (CREST)

CREST — Coastal Restoration and Enhancement Through Science and Technology

17 August, 2004

Mr. Tim Axtman
CEMVN-PM-C
PO Box 60267
New Orleans, LA 70160-0267

Dear Mr. Axtman,

Thank you for the opportunity to comment on the public draft of the Louisiana Coastal Area (LCA) Plan. I believe that that the present version is a vast improvement over earlier versions, and that most of the engineering work suggested is both feasible and necessary. However, I believe that several major gaps still exist. These need filling if the plan is to be truly comprehensive.

Please note that the comments appended below are my personal opinion and do not represent the views of the CREST Program per se. They are offered in the hope of improving a document that is vital to the survival and future development of southern Louisiana.

CREST 01

1. The plan itself concentrates solely on the Louisiana coastal region. While this is fine as regards the direct problem of coastal land loss, it is important to remember that the Louisiana coast is the final end member of an enormous river system, and that much of the problem found in Louisiana is dependent on things that happen upstream. Thus, the addition of nutrients to the river that has led to eutrophication and the formation of the so-called "dead zone" off the Louisiana coast happens mainly well upstream of Louisiana, yet there is almost nothing in the document about possible methods of alleviating this problem. Similarly, the Louisiana coastal area is starved of nutrients not only because of the large mileage of levees along the banks of the Mississippi, which prevents sediment and nutrients from entering coastal marshlands, but also because of the long-term effects of dam building higher up the river and its tributaries that retain sediment in the mid-west. It is uncertain if the amount of sediment remaining in the river will be sufficient for the diversions that are in the plan. CREST 02

CREST 03

2. While the CWPPRA program is cited in several places, and the statement is made that the LCA and CWPPRA will be integrated, it is not clear how this will take place. The individual CWPPRA projects completed or scheduled to date are not integrated but have been developed on an ad hoc basis, and given that they are generally local in scope, it is hard to see how they will fit into a large-scale, integrated LCA program. The LCA has a stated commitment to science and monitoring which is noticeably absent from CWPPRA. Additionally, there remains the question of CWPPRA funding and whether it will continue as a separate entity or be subsumed into the overall funding for the LCA (in which case the above may not be a problem).

3. There is a succinct description, on pp. MR-161 et seq., of the environmental degradation and marsh destruction that has taken place along the Mississippi River-Gulf Outlet (MRGO). Many reports have suggested that the best way to alleviate the problems caused by the MRGO is to shut the waterway (even shipping owners agree with this), but nowhere in the LCA is this point suggested. Instead, the plan recommends spending an CREST 04

SC&E, Energy, Coast, and Environment Bldg., Room 1143 • Baton Rouge, LA 70803 • 225/578-0069 • FAX 225/578-0102

CREST 01: USACE concurs that the causes and solutions to the so-called dead zone are mainly upstream of Louisiana. This point is made in Section 1 with the statement that Gulf hypoxia is a problem "that will require action throughout the Mississippi River Basin to solve." Actions implemented as part of the LCA Plan will be consistent with the January 2001, "Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico." The Hypoxia Action Plan describes a national strategy to reduce the frequency, duration, size and degree of oxygen depletion in the northern Gulf of Mexico.

CREST 02: The main report does point out that the suspended sediments in the river is a critical component in land building in the deltaic process and that suspended sediments in the river have decreased over time due to the reasons pointed out in the above comment. The proposed alternatives in the near-term LCA Plan take into account the past ten-year average sediment concentration in making projections for the land building capabilities for the river diversion plans.

CREST 03: Whenever possible, CWPPRA projects were integrated and included as features considered for the LCA Plan. In some cases, CWPPRA projects were regional in nature and did not meet the large-scale needs of the LCA Study. In addition, please see General Response #6 regarding the relationship of CWPPRA and LCA.

CREST 04: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 9: Dr. Piers Chapman, Coastal Restoration and Enhancement Through Science and Technology (CREST)

CREST 04 (Continued)

estimated $107 million to construct a rock breakwater along the northern bank of the MRGO. Nowhere is it explained how this work will reduce the continuing erosion along the south bank of the MRGO nor reduce the saltwater intrusion which is equally important in destroying the freshwater marshes in the region.

CREST 05

4. There are plans to establish a Science and Technology (S&T) Office with a budget of $100 million. This is described in both the main LCA plan itself and, in more detail, in the S&T Plan (Appendix A). However, there is almost no mention of any liaison with ongoing local programs, such as the CREST Program, the Louisiana Governor's Applied Coastal R&D Program, the USACE's new Center for Expertise for Ecosystem Restoration, or NOAA's Sea Grant program. At least three of these programs are already funding research projects of direct relevance to the LCA. Other national programs on coastal restoration, including major research and engineering programs in the Florida Everglades, California or Chesapeake Bay are completely ignored. I find it hard to believe that nothing in any of these programs is relevant to the LCA.

CREST 06

There is a large section within the S&T Plan that deals with data management, yet despite the detailed description of the planned manpower needs of the S&T Office the manpower needs and likely costs of this sector are ignored. Given that one part of the monitoring program calls for the establishment of up to 700 monitoring stations, and that the S&T Plan discusses the need for integrated databases for modeling and assessment, this omission is crucial. It has been estimated that large programs need to spend up to 10-15% of their research budgets on data management and ensuring the integrity of their databases; from experience gained within large-scale oceanography programs I believe also that much of the data management and quality control needs to be done by researchers who are active in the field and who themselves are interested in the data. Without this kind of active input from the research community, who is to guarantee the continuing accuracy and compatibility of the data that are collected during any long-term monitoring program?

CREST 07

Several portions of the latest version of the S&T Plan remain incomprehensible as written, and the Plan has clearly been put together from isolated contributions.

CREST 08

5. A major portion of the Plan considers the cost accounting for the various projects. This would appear to be a crucial part of the Plan, but the document is anything but clear on how the individual projects recommended for the initial phase of work fit into the various scenarios. It is also unclear what criteria have actually been used to determine whether a given project or group of projects is cost-effective or what the term "cost effective" actually means in this instance; on p. MR-94 it is stated that "Since these measures were not readily translatable to dollar terms, traditional benefit-cost analysis was not possible."

CREST 09

I would have thought that there would be some mention of the socio-economic benefits likely to ensue from the major capital projects proposed here and that these could have been brought into the cost-benefit analysis. What, for example, is the likely benefit of improved flood protection for Houma or Thibodaux? This should be a relatively easy number to calculate. While the absolute numbers will always be a subject for discussion, if the LCA Plan does not cover this aspect then the insurance companies will do the job themselves and simply refuse to provide insurance for much of coastal Louisiana. Section 2.2.3 purports to consider these aspects, but no figures are provided for the likely monetary benefits of the work.

CREST 10

6. There are several untrue statements in the Plan. For example, on p. MR-22 it is stated that "Hypoxia exists when dissolved oxygen concentrations are less than those necessary to

CREST 05: The S&T Program structure is described in Section 4 of the Main Report and in detail in Appendix A. The S&T Program structure includes the Science Coordination Team, which will address coordination and incorporation of other ongoing federal, state and academic research. The SCT coordination effort will be comprehensive and will include the agency research efforts of other restoration programs, other federal and state agencies and programs, and local and academic projects that are applicable to the LCA Plan restoration effort.

CREST 06: The primary purpose of the proposed S&T Program, and the associated data collection and management, is to support the effective implementation of the LCA Plan. To the maximum extent possible the S&T and data collection effort must also support research and expansion of the knowledge base to improve the ultimate performance of coastal restoration. However, the efficient implementation of on the ground solutions must be the first priority. Data management issues, resources and strategies will be addressed as early actions of the S&T Program.

CREST 07: Please see General Response #2 regarding the proposed the S&T Program.

CREST 08: Individual features were evaluated for their cost effectiveness during the development of coastwide frameworks in the plan formulation process. Costs could be quantified using traditional estimating techniques. Cost-effectiveness was evaluated on a dollar per unit output basis, rather than the dollar cost per dollar benefit methods used in traditional cost analyses.

CREST 09: Furthermore, socio-economic benefits including flood protection will be quantified in the feasibility reports.

Letter 9: Dr. Piers Chapman, Coastal Restoration and Enhancement Through Science and Technology (CREST)

sustain marine life. Hypoxic zones are sometimes referred to as "dead zones" because marine life cannot survive within them."

CREST 10 (Continued)

Hypoxia does not mean the system cannot sustain aquatic life. What it does mean is that the dissolved oxygen concentration is well below saturation and may impair the long-term ability of fish and other organisms, particularly benthic organisms, to survive in the region The most productive regions for fisheries in the world oceans are upwelling zones, where hypoxia is an almost constant fact of life but the fish can swim in and out of the affected area. It is only when oxygen concentrations drop well below 1 ml/l that even the benthic organisms, which either cannot move or can only move very slowly, die.

CREST 11

Some statements on oil production (MR-50 – MR-53) are also not true as stated. On p. MR-50 it states that "Louisiana's production of crude oil has decreased by about 30 percent since 1980." This is only true if one considers onshore production, as Fig. MR-25 makes clear. This sentence would read better as:

"Louisiana's onshore production of crude oil has decreased by about 30 percent since 1980, although production within the Louisiana OCS has increased steadily since 1990 and now greatly exceeds the onshore production rate (figure MR-25)."

CREST 12

Similarly, at the bottom of p. MR-52, the first sentence in paragraph 2.2.3.1.2 could be improved by changing it to "Most of Louisiana's onshore oil and gas production…."

CREST 13

7. Various statements are made and figures produced that do not allow people to compare them properly with anything. For example, No definition of 'productivity' is given in the section 2.2.2.2.2, so the discussion is almost impossible to follow. (Why would vegetative production not follow land area changes directly, for example?) The statements may be self-evident to the authors of the draft plan, but they are certainly not clear to any readers who were not involved in the plan formulation.

CREST 14

A similar lack of definition is found later in the plan. For example, section 4 on plan Implementation talks about the likely benefits of each individual plan component. Yet in several places there is an underlying assumption that "if we build it, they will come." Thus, on p. MR-169 the discussion of Shell island restoration states categorically that the work will bring back the former oyster fishery, improve the former recreational and shellfish fishery, and lead to the recovery of the bird rookery. None of this can possibly be known with this degree of certainty.

As stated above, these comments are my personal view of the draft LCA Plan. I will be happy to expand on any of them as necessary.

Sincerely,

Dr. Piers Chapman
Director, CREST Program Office

CREST 10: "Hypoxia is the condition in which dissolved oxygen is below the level necessary to sustain most animal life – generally defined by dissolved oxygen levels below 2 mg/l." We recognize the concern with the second sentence being overly general and subject to misinterpretation. Accordingly we will remove the sentence that begins "Hypoxic zones are sometimes referred to…"

CREST 11: Comment noted. The appropriate section(s) have been revised accordingly.

CREST 12: Comment noted. The appropriate section(s) have been revised accordingly.

CREST 13: Comment noted. The initial increases in productivity displayed in Figures MR 21 & 22 are likely an artifact of the averaging of salinities for input to the ecologic models. The key point to be made is, in fact, that declining acreage does result in a corresponding decline in productivity even though the coincident habitat suitability may remain relatively stable.

CREST 14: The detailed descriptions of the near-term critical features proposed for conditional authorization have been rewritten for clarification. The noted text has been removed.

Letter 10: Mr. Sherwood Gagliano, Coastal Restoration Group, LLC (CRGSG)

Coastal Restoration Group, LLC
4176 Canal Street, New Orleans, LA 70119-5994
(504) 486-5901 – Fax (504) 488-1714

July 27, 2004

Mr. Tim Axtman
CEMVN-PM-C
P. O. Box 60267
New Orleans, Louisiana 70160-0267

RE: Comments on the Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study

Dear Mr. Axtman:

The Coastal Restoration Group, LLC consists of a consortium of Louisiana scientists, engineers and planners who are assisting the St. Bernard Parish Government with technical aspects of the closure of the Mississippi River – Gulf Outlet (MR – GO) and other matters related to coastal restoration in St. Bernard Parish. This statement focuses on MR- GO closure and is submitted in behalf of the Parish Government.

The construction, operation, and maintenance of the MR-GO have caused substantial environmental changes in the Pontchartrain and Breton Sound drainage basins of southeastern Louisiana east of the Mississippi River. The channel has breached major hydrologic boundaries and has extended marine conditions into formerly fresh, low energy swamp, marsh, and lacustrine areas. More than 65,000 acres of natural habitat have been lost or modified as a result of the MR-GO. The extensive area affected by the MR-GO is important to the ecology of coastal Louisiana and the entire Gulf of Mexico.

Other issues and claims raised regarding the MR-GO include: the channel's potential role in creating an avenue for tidal buildup and surge during storms; erosion of wetlands that flank and protect flood protection levees; bank and marsh erosion from wave action and water surge caused by ships that commonly exceed either speed limits or depth limits, or both.

At this time, the MR-GO remains a "special problem" whose resolution can be made by advancing the development of a specific structural and operational plan for closure or modification of the channel and associated environmental restoration, as discussed below.

The St. Bernard Components of a Restoration Plan

In conjunction with the structural closure of the MR-GO channel, four main elements of restoration are appropriate: 1) public safety, 2) hydrologic restoration, 3) management and

Letter 10: Mr. Sherwood Gagliano, Coastal Restoration Group, LLC (CRGSG)

Coastal Restoration Group, LLC

Tim Axtman
July 27, 2004
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enhancement of estuarine habitats, and 4) public use for water oriented activities. These conceptual elements are drawn from work done during the past 30 years by and for the parish government including environmental baseline studies, damage evaluations of the MR-GO, coastal management planning, and from numerous public hearings held by the parish government and environmental and conservation groups.

Public Safety

CRGSG 01 The channel must be closed in a way that will reduce the buildup of tides in advance of storms and arrest surge which may advance through the channel.

CRGSG 02 There is a need to construct barrier structures and/or islands along the southern and western shores of Lake Borgne and perhaps across the lake itself to absorb waves before they reach the hurricane protection levee. Without remedial action the shore of Lake Borgne will break into the MR-GO and thus the hurricane protection levees will be directly exposed to wave erosion and storm surge.

CRGSG 03 The remaining marshes east of the MR-GO provide a valuable buffer against storm surge and must be maintained and enhanced to provide adequate safety.

Hydrologic Restoration

CRGSG 04 Construction of a gated control structure on the MR-GO where it cuts through the Bayou La Loutre natural levee ridge, will restore the natural hydrologic axis of the Lake Borgne basin to an east-west direction and will reduce storm-generated tides and surges. Such a control gate may be similar to a $65 million "sector gate" that has been proposed for the Harvey Canal, as part of the West Bank Hurricane Protection Project (see Attachment). A similar sector gate located at Golden Meadow is an element of the flood protection system operated by the South Lafourche Levee District along Bayou Lafourche and has been in operation for 20 years.

CRGSG 05 The feasibility of constructing a diversion control structure and conveyance channel in the vicinity of Violet to supply sediment charged Mississippi River water to this vast area should be investigated. Mississippi River water introduced at Violet could then be directed into and through the channel segment above the closure structure into three estuarine sub-basins (identified in the Coast 2050 Plan as the Biloxi Marshes, the Eloi Bay, and the Jean Louis Robin planning units). This introduction of fresh water and sediment will offset erosion and enhance each of these sub-basins.

CRGSG 06 In neighboring Orleans Parish special attention should be directed toward restoring the East Orleans land bridge. This feature protects all of the communities around Lake

CRGSG 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

CRGSG 02: The proposed LCA Plan includes a near-term critical restoration feature for the MRGO that would construct rock breakwaters along the north bank of the MRGO and along segments of the southern shoreline of Lake Borgne. This proposed feature is consistent with the following Coast 2050 strategies: to maintain shoreline integrity of Lake Borgne to restore and stabilize the north bank of the MRGO, to restore and maintain the landbridge between MRGO and Lake Borgne with shoreline protection. Closure of the MRGO is currently being considered in a separate study; the results of which would be considered during implementation of the LCA Plan. Restoration of the marshes east of the MRGO could be considered under the proposed beneficial use of dredged material component of the LCA Plan. Also, please see General Response #1 regarding the proposed MRGO Restoration Feature.

CRGSG 03: Comment noted.

CRGSG 04: Please see General Response #1 regarding the proposed MRGO Restoration Feature. Also, features such as those discussed in this comment could be investigated in the continued development of MRGO restoration features under the LCA Plan's investigations of modification to existing structures.

CRGSG 05: The existing Violet Siphon has been rehabilitated and is functioning properly to benefit this area. In the future, the operation of this feature may bee evaluated and modifications to its operations may be proposed using adaptive management techniques as described in the discussion on Programmatic Authority for Investigations of Modification of Existing Structures included in Section 4 of the Main Report.

Letter 10: Mr. Sherwood Gagliano, Coastal Restoration Group, LLC (CRGSG)

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Pontchartrain from storm surge. The tidal channels which pass through the land bridge control the hydrology of Lake Pontcharain and Lake Maurepas. With the closure structure at Bayou LaLoutre in place, Mississippi River water introduction at Violet will reach the land bridge area and have beneficial effects to the marsh. CRGSG 06 (Continued)

CRGSG 07 The closure plan must include provisions for the segment of the MR-GO below the closure structure, which extends through both marshes and the open waters of Breton Sound in Plaquemines Parish. The channel through the sound will shoal and revert to bay/sound conditions without maintenance dredging, but some restoration work may be required. Provisions may also be required to control further erosion and restore the banks of the channel segment which passes through the marsh.

Management and Enhancement of Estuarine Habitats

It is proposed that partial mitigation for MR-GO environmental damage will be accomplished though specific projects designed to manage and enhance estuarine habitats, with an emphasis on fisheries. This area is one of, if not the most, extensive and important tidal marsh/estuarine areas along the entire northern Gulf of Mexico. One goal should be to develop a model program to increase the standing crop and fisheries yield in the region traversed by the MR-GO for the benefit of both commercial and recreational fishermen. An element of the fisheries enhancement program will be an operation plan for the Mississippi River diversion structure at Violet, based on real-time monitoring of hydrologic and water chemistry conditions. This will be achieved by establishing a network of monitoring stations with telemetry capability linked to computer models. This monitoring network will provide the basis for operating water control structures to optimize conditions for fish. CRGSG 08

An intensive program of reef building and enhancement of fisheries habitat on water bottoms and along the shore zone should be developed in conjunction with measures to reduce edge erosion. The existing dredge disposal area along the south bank of the MR-GO channel is an ideal location for a fish hatchery, which could be developed to produce larvae and fingerlings of estuarine species for controlled release. The hatchery would utilize advanced aquacultural techniques and would provide new jobs.

Public Use for Water Oriented Activities

The region has long been utilized for recreational fishing and other water oriented recreational activities. Another goal of the mitigation should be to make it a "world class" area for such use, including eco-tourism. This means developing a program of facilities enhancement for safe public use, training personnel for resulting jobs, promotion, etc. This program must have provisions for full private sector participation and job training. The technical training program at the Elaine P. Nunez Community

CRGSG 06: Analysis of the East Orleans land bridge indicated that shoreline and interior marsh erosion and loss rates are low relative to other areas within the Pontchartrain Basin, therefore this area was not considered a critical need at this time. In addition this area has been investigated as part of the CWPPRA restoration process and no projects have been selected in this area for similar reasons. This feature will continue to be considered as long-term actions are investigated. The future of this area may also include storm protection features considered under ongoing reanalysis of hurricane protection. These activities will be coordinated through the continuing LCA investigations.

CRGSG 07: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

CRGSG 08: As described in Chapter 6 "Coordination and Compliance with Environmental Requirements." In the FPEIS, the USACE is required to coordinate and comply with various statutory authorities including: environmental laws, regulations, Executive Orders, policies, rules and other guidance. This includes consideration of public safety and public use of water resources. Restoration of hydrology is one of the critical needs elements addressed by the near-term LCA Plan in the Critical Needs Criterion #2: sustainability through restored deltaic functions. The near-term LCA Plan addresses four critical needs: prevention of predicted land loss, sustainability through restored deltaic function, sustainability through restoration of geomorphic structure, and protection of vital socio-economic resources. Proposed restoration features addressing these critical needs would provide a better understanding of the coastal ecosystem and lead to better management of coastal Louisiana estuarine habitats by those Federal, state, and local agencies with mandated management jurisdiction.

Letter 10: Mr. Sherwood Gagliano, Coastal Restoration Group, LLC (CRGSG)

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College in St. Bernard Parish should be expanded to provide training for local students for new jobs, which will result from the closure process. CRGSG 08 (Continued)

Conclusion

CRGSG 09 The restoration plan must not be static. It must be a process, with constant feedback from lessons learned during implementation. It must constantly embrace changes in need, refined goals, fresh ideas, and new technology.

Thank you for the opportunity to provide input into this evolving plan.

Yours truly,

Sherwood Gagliano, PH.D.

CRGSG 09: Concur. The LCA Plan will be updated and future authorities will be proposed to address ongoing restoration needs of coastal Louisiana.

Letter 11: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#1)

CL&F RESOURCES LP
CONTINENTAL LAND & FUR CO., INC.
111 VETERANS MEMORIAL BLVD., SUITE 500
METAIRIE, LOUISIANA 70005-3099
TELEPHONE 504/378-9378 TELECOPIER 504/378-4398

August 20, 2004

U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Attention: Dr. William P. Klein, Jr.
CEMVN-PM-RS

Re: Louisiana Coastal Area (LCA)
DPEIS

Gentlemen:

Continental Land & Fur Co., Inc. (CL&F) owns property in the upper Penchant sub-basin of the Terrebonne basin, all of which is located in Townships 17 and 18 South, Ranges 12, 13, 14, and 15 East, Terrebonne Parish, Louisiana. CL&F has owned and managed its property for over 70 years, the vast majority of which is classified as a freshwater flotant marsh. CL&F's property falls within Subprovince 3, as delineated in the Louisiana Coastal Area (LCA) Study. Continental Land and Fur respectfully requests that the following comments be taken into consideration in revising the draft Tentatively Selected Plan as described in the LCA Study report.

Management of the Penchant Basin (West Terrebonne) -

Problems - At times this basin has too much water. Since the 1970s, this area has changed from a fresh, low-energy backwater area occupied by extensive floating marshes to a receiving area of a major distributary system of the Atchafalaya River. Bayou Penchant and the GIWW are the principal branches of this distributary. As a consequence, the landforms and floating marshes are in transition. Local water quality problems exist as a result of the lack of drainage of rainwater which is being blocked by Atchafalaya water inflow through distributaries. Erosion from barge and ocean going vessel movement through the channels remains a chronic problem along the banks of the GIWW, Avoca Island Cut-Off Channel, and Bayous Chene, Boeuf and Black navigation project.

CL&F#1 01 *Landowner recommended solutions* - Our recommendations for ecosystem restoration in the Penchant Basin are also included in the attached letter of comments submitted to the Corps of Engineers in reference to the LCA Comprehensive Study dated May 8, 2002.

1

CL&F#1 01: Comments noted. Responses to address comments in the letter dated May 8, 2002 follow (CL&F#1 15-CL&F#1 28).

Letter 11: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#1)

CL&F#1 01 (Continued)

We recommend management of the sediment-laden distributary inflow. Additional outlets are needed at the lower, southeastern end of the basin. Measures are also needed to stop bank erosion resulting from the barge tows along the GIWW without disrupting natural levee building processes.

CL&F#1 02

An additional problem involves outfall for the Lake Verret Pump Project. The planned pumps will discharge into the upper Penchant marshes, which are already experiencing excessive flooding. The planned pumps should be moved to the east, where the freshwater outfall would be beneficial in offsetting saltwater intrusion. There should be a re-evaluation of the allocation of Mississippi (70%)/Atchafalaya (30%) flow at the Old River Control Structure. By reducing the flow down the Atchafalaya, flooding problems in Morgan City, the Lake Verret basin and the flotant marshes in the Penchant basin would be alleviated. By changing the allocation, more river water would be available for the proposed Third Delta Project, and other proposed diversions along the Mississippi River.

CL&F#1 03

The CWPPRA approved Bayou Penchant/Lake Penchant Watershed Project (TE 34) is designed to manage the sediment and hydrologic flow in the approximately 500,000-acre basin. This project also provides for additional outlets at the lower southeastern end of the basin. These new outlets would relieve flooding in the northern part of the basin and send the river water to the southern end, which is currently degrading due to saltwater intrusion. Additionally, measures need to be implemented to stop bank erosion resulting from barge and ocean going vessels along the federally authorized navigation channels named previously. The landowners of the Penchant Basin worked diligently with the National Resources Conservation Service for years in developing this plan and remain supportive of the authorized CWPPRA project.

The LCA proposal for the Penchant Basin –CL&F was surprised to learn that the LCA Study plan proposes to route additional Atchafalaya River water through and into the Penchant Basin. As stated above, the upper Penchant marshes already have too much water. As a major landowner of this basin we are opposed to any proposal which distributes more water on the flooded flotant marshes. We continue to support the approved CWPPRA Penchant Basin Project and the Coast 2050 plan. It is our understanding that several CWPPRA projects, including TE 34, have not fared well in the LCA sorting criteria. We request that the LCA team provide consistent application of the criteria across all measures being considered and reconsider the effectiveness of CWPPRA Projects and specifically TE-34.

CL&F#1 04

We like the Coast 2050 Plan because it addresses coastal Louisiana's most critical restoration issues and it was developed with large public participation. The Coast 2050 Plan should continue to be the preferred plan for coastal restoration and the standard by which projects are set as priorities.

CL&F#1 05

LCA Pipeline Canal Restoration Using Different Methods–Due to the organic nature of soil composition of CL&F's flotant marsh, we feel that backfilling canals on our property would be cost prohibitive and damaging to the borrow area of the marsh. Also for

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CL&F#1 02: Comments noted. The Lake Verret Pump Project (called the Amelia Pump Station and Lock Complex of the Atchafalaya Basin Floodway, Louisiana flood control project) was not considered as a potential restoration feature in the plan formulation process for LCA. If the project were submitted to the USACE under separate authority, it would be considered.

The 70/30 flow distribution at the old River control Structure will be evaluated to address uncertainties and refine possible approaches under the LCA Plan as one of the large-scale and long-term concepts requiring detail study.

CL&F#1 03: The proposed LCA near-term restoration features conveying Atchafalaya River water to the northern Terrebonne marshes would be closely coordinated and consistent with the CWPPRA Penchant Basins Project. Please also see General Response #6 regarding the relationship between CWPPRA and LCA.

Section 3 of the LCA Plan in the FPEIS address the sorting criteria and plan formulation process. . When sequencing components of the PBMO, Penchant Basin Restoration was prioritized along with other PBMO components based on four sequencing rules. Section 4 of the plan gives scheduling preference to projects that address irreversible losses of habitat and ecosystem function, can be implemented through modification of existing structures, or that have design initiated or completed. While the Penchant Basin Plan satisfied sorting and critical needs criteria, the sequencing and resource requirements described in Section 4 resulted in the determination that the Penchant Basin Plan would be implemented more than ten years into the future, beyond the planning horizon of the current program. Based on these considerations, this feature was not included as an element of the LCA Plan critical near-term restoration actions.

Letter 11: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#1)

CL&F#1 05 (Continued)

reasons elsewhere discussed in this letter, we would also be opposed to gapping/degrading spoil banks to restore natural hydrologies.

Additional Comments –

CL&F#1 06

Different marsh types need different approaches – Coastal restoration and regulatory agencies need to realize that best management practices must be tailored to the varying marsh conditions found across the Louisiana coast. For example, CL&F's flotant marshes consist of thin and thick mats of interwoven roots binding decaying plant detritus into a platform that floats on the water. The peats and organic deposits underlying the flotant marshes are literally held in place by the natural ridges surrounding them. Flotant marshes are remarkably resilient as long as these natural ridges remain un-breached. Once breached or gapped, however, the in and out movement of water through the gaps creates a pumping effect which rapidly removes the semi-fluid and poorly consolidated organic materials and clays that underlie the flotant marsh.

The numerous oil and gas canal banks on CL&F's property perform the same functions as natural ridges in the flotant marshes. Currently the regulatory agencies require oil and gas operators to provide compensatory mitigation if the organic material recovered in maintenance dredging operations is placed on the spoil banks to protect the flotant marshes, even though the material quickly vegetates and subsides back to nearly marsh level.

CL&F#1 07

Beneficial use of dredged material – This concept has been embraced in most of the restoration plans to date and is a Coast 2050 Coastwide Common Strategy. Unfortunately, the regulatory agencies encourage oil and gas companies operating in South Louisiana to prop or wheel wash, thereby destroying the dredge material instead of placing it on adjacent spoil banks. When dredge material is placed on spoil banks at CL&F's request, the agencies require mitigation due to the temporary impact on wetland vegetation on the old spoil banks. This added requirement prevents the beneficial management practice of restoring spoil banks from being more widely used.

CL&F#1 08

Navigation channels – The stabilization of the width of major navigational channels is also a Coast 2050 Coastwide Common Strategy. The width of the Gulf Intracoastal Waterway (GIWW), Avoca Island Cut-off Channel and the Bayous Boeuf, Chene, and Black project have all greatly exceeded the contractual right-of-way width as a result of bank erosion. The GIWW which was initially dredged to 100-125' width currently exceeds 1,000' in areas. To the best of CL&F's knowledge, the Corps of Engineers has never maintained the banks of these navigational channels. Since these channels are beyond the original width provided for in the right-of-way agreement, the Corps should compensate the affected landowners. CWPPRA Project TE-43, a bank stabilization along the GIWW in Terrebonne Parish should be given a high priority ranking, as it will bring much-needed protection to an area that has suffered extensive erosion due to non-maintenance of the GIWW banks.

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CL&F#1 04: Comment noted. Please refer to General Response #7 regarding the relationship between Coast 2050 and LCA.

CL&F#1 05: Comments noted.

CL&F#1 06: Maintaining the robust vegetative production in healthy floating marshes, particularly belowground, is the critical factor in floating mat stability and the subsequent longevity of the habitat. There are indications that spoilbank restoration in certain circumstances could provide protective benefits to some floating marsh areas in Louisiana. Nevertheless, there are no definitive studies to date that have provided resolution to the issue of utilizing spoilbanks as a blanket application to promote stability in all floating marshes, and many questions remain. A major issue of concern is how impoundment affects vegetative productivity and peat accretion, particularly over the long term. The nourishing inputs required to sustain optimum productivity and minimize susceptibility to other stressors is yet unknown. Additionally, the most suitable target hydrology and optimum levels of exchange, and the appropriate elevation of restored banks that would be required to mimic natural low-energy systems are elements that should also be ascertained.

LCA actions/measures that are anticipated to affect floating marsh ecosystems represent an opportunity to resolve uncertainties associated with this application issue. The LCA S&T Program in coordination with landowners could establish the scientific field evaluations necessary to address the uncertainties and definitively provide recommendations for appropriate design and application of this technology (personal communication Dr. Charles Sasser, September 28, 2004).

Letter 11: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#1)

CL&F#1 07: Many spoil banks are considered jurisdictional wetlands. Public interest and 404(b)1 reviews look for the least damaging, most practicable alternative. The importance of spoil bank restoration is specific to each location and handled during permitting on an individual basis.

CL&F#1 08: Bank stabilization along the GIWW and the other referenced waterbodies would require additional Congressional authorization beyond the current authorization for operation and maintenance of the channel for navigation purposes. The project to Convey Atchafalaya River water to northern Terrebonne marshes – via a small diversion in the Avoca Island levee, repairing eroding banks of the GIWW, enlarging constrictions in the GIWW below Gibson and Houma, and channel construction/enlargement of Grand Bayou conveyance is one of the 10 restoration features recommended for study and Congressional authorization in the LCA Plan. This project would address some of these restoration concerns. Regarding the issue of compensation, the Federal government must consider each taking claim on a case-by-case basis. Projects were sequenced for implementation according to the sequencing rules described in the discussion of plan formulation.

Letter 11: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#1)

Summary -

CL&F#1 09 Provide bank stabilization along navigation channels. Before any consideration is given to directing more water through the GIWW, the banks must be stabilized. The Corps of Engineers should be required to stabilize the banks of the GIWW, Avoca Island Cut-off Channel and the Bayous Chene, Boeuf and Black navigation channels with rigid materials (rip rap, articulated concrete mat, etc.) and dredge material resulting from annual maintenance dredging. Currently, the dredge material is disposed of in the most cost efficient manner and not on adjoining degraded marshes.

CL&F#1 10 Implementation of the Bayou Penchant/Lake Penchant Watershed CWPPRA project should be given high priority.

CL&F#1 11 Shift position of Lake Verret pumps to the east where outfall would offset saltwater intrusion. The proposed upper basin locations will only aggravate excessive flooding of the marshes.

CL&F#1 12 Maintain oil and gas canal banks in fresh flotant marsh environments by placing the dredge material from maintenance operations on adjacent spoil banks. The spoil bank provides the framework necessary for protection of fragile, interior flotant marshes.

CL&F#1 13 Reevaluate the Mississippi /Atchafalaya allocation of flow at the Old River Control Structure. Flow down the Atchafalaya should be reduced to alleviate flooding problems in Morgan City, the Lake Verret Basin and the flotant marshes in the Penchant Basin and to provide more water for needed diversions along the Mississippi River.

CL&F#1 14 The Coast 2050 plan should continue to be used as the blueprint for coastal restoration and the standard for setting projects in priority order.

Thank you for the opportunity to allow CL&F to submit comments on documents pertaining to this important program. If you should have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely,

George A. Strain
Vice President

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CL&F#1 09: Comments noted. Please see the appropriate responses above.

CL&F#1 10: Comment noted. Please see response to CL&F#1 03.

CL&F#1 11: Please see response to CL&F#1 02.

CL&F#1 12: Please see response to CL&F#1 06.

CL&F#1 13: A reevaluation of the flow distribution at the Old River Control Structure is a component of the LCA Plan as part of the large-scale and long-term concepts requiring detailed study.

CL&F#1 14: Please see General Response #7 regarding the relationship between Coast 2050 and LCA.

Letter 11: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#1)

CONTINENTAL LAND & FUR CO., INC.
909 POYDRAS STREET, SUITE 2100
NEW ORLEANS, LOUISIANA 70112-1051
TELEPHONE 504 / 586-1718 TELECOPIER 504 / 581-4398

May 8, 2002

VIA FAX

U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

Attention: Mr. Troy Constance
Study Manager
CEMVN-PM-W

Re: LCA Comprehensive Study

Gentlemen:

Continental Land & Fur Co., Inc. (CL&F) owns property in the upper Penchant sub-basin of the Terrebonne basin, all of which is located in Townships 17 and 18 South, Ranges 12, 13, 14 and 15 East, Terrebonne Parish, Louisiana. CL&F has owned and managed its property for over 70 years, the vast majority of which is classified as a freshwater flotant marsh. CL&F's property falls within Coast 2050 Region 3, therefore, CL&F respectfully requests that the following comments be incorporated in the Programmatic Supplemental Environmental Impact Statement:

CL&F#1 15

- **Different marsh types need different approaches** - Coastal restoration and regulatory agencies need to realize that the different marsh types in coastal Louisiana require different management approaches. For example, CL&F's flotant marshes consist of thin and thick mats of interwoven roots binding decaying plant detritus into a platform that floats on the water. The peats and organic deposits underlying the flotant marshes are literally held in place by the natural ridges surrounding them. Flotant marshes are remarkably resilient as long as these natural ridges remain unbreached. Once breached, however, the movement of water through the gaps creates a pumping effect which rapidly removes the fluid and poorly consolidated material underlying the flotant marsh. The numerous oil and gas canal banks on CL&F's property perform the same functions as a natural ridge in the flotant marshes. Currently, the agencies do not allow oil and gas operators to place the organic material recovered in maintenance dredging operations on the canal spoilbanks to protect the flotant marshes, even though the material quickly vegetates and subsides back to nearly marsh level in a very short time frame.

CL&F#1 15: Please see response to CL&F#1 06.

Letter 11: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#1)

Troy Constance, CEMVN-PM-W
U.S. Army Corps of Engineers
May 8, 2002
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- **Beneficial use of dredged material** - This concept has been embraced in most of the restoration plans to date and is a Coast 2050 Coastwide Common Strategy. Unfortunately, the regulatory agencies encourage oil and gas companies operating in South Louisiana to prop or wheel wash, thereby destroying the dredged material instead of placing the material on the adjacent spoilbanks. When dredged material is placed on the spoilbanks at our request, the agencies require mitigation due to the impact to the old spoilbanks. CL&F#1 16

- **Navigational channels** - The stabilization of the width of major navigational channels is also a Coast 2050 Coastwide Common Strategy. The Gulf Intracoastal Waterway (GIWW), Avoca Island Cut-off Channel and the Bayous Boeuf, Chene, and Black project have eroded many times beyond the contractual right of way width. To the best of our knowledge, the Corps of Engineers has never maintained the banks of these navigational channels. Since these channels are beyond the original width provided for in the right of way agreements, the Corps of Engineers should compensate the affected landowners. CWPPRA Project TE-43 has been approved for bank stabilization along the GIWW in Terrebonne Parish. This project should be given high priority as it will bring much needed protection to an area that has suffered severe erosion due to non-maintenance of the GIWW banks. CL&F#1 17 CL&F#1

CL&F Coast 2050 Region 3-Regional Ecosystem Strategies Proposals/Revisions

- Revise strategy 6 to provide for the bank stabilization of navigation channels will also be for the protection of adjacent wetlands. CL&F#1 19
- Revise strategy 7 to provide that before more Atchafalaya water is directed through the GIWW, the banks need to be stabilized. CL&F#1 20
- Revise strategy 11 to provide that oil and gas canal banks in a flotant marsh should be maintained. CL&F#1 21
- Bayou Penchant/Lake Penchant watershed CWPPRA project. This project is designed to manage the sediment and hydrologic flow in the Penchant basin. A goal of the project is to relieve flooding in the northern end of the basin by sending Atchafalaya river water to the southern end through additional outlets. Implementation of this project should be given high priority. CL&F#1 22
- Wave limit controls should be instituted on the GIWW, Avoca Island Cut-off Channel and the Bayous Chene, Boeuf, and Black navigation project in an effort to reduce the impact of the boat wakes on the adjoining marshes. CL&F#1 23
- Lake Verret Pump Project - The upper Penchant marshes are experiencing flooding conditions. Consider moving the pumps to move water to the east where saltwater intrusion is a problem rather than transferring it to an area where excessive water is already a problem. CL&F#1 24

CL&F#1 16: Please see response to CL&F#1 07.

CL&F#1 17: Please see response to CL&F#1 08.

CL&F#1 18: Please see response to CL&F#1 08.

CL&F#1 19: The translation of the Coast 2050 strategies into the LCA Plan effort was accomplished in two manners. One was the identification of key or core strategies in each region or subprovince. These were used as a basis from which to initiate the overall plan formulation in each subprovince. The second manner was the development of specific restoration features, many of which built directly on identified Coast 2050 strategies. In some cases Coast 2050 strategies were combined in specific restoration feature ideas. This was the case for Coast 2050 Region 3 strategies 6 & 7. The Convey Atchafalaya River Water to Northern Terrebonne Marshes feature utilizes both of these strategies. Several other features identified in the LCA TSP also focus on the maintenance of geomorphic structure and management of hydrology which is reflective of Coast 2050 strategy 11 in Subprovince 3. In fact the core strategies in Subprovince 3 principally involved the management of available riverine resources and hydrology and the maintenance and restoration of geomorphic structure. With this in mind the comment confirms issues that would require consideration in assessing the appropriate design of the features currently proposed prior to construction approval.

CL&F#1 20: Please see response to CL&F#1 19.

CL&F#1 21: Please see response to CL&F#1 19.

CL&F#1 22: Please see response to CL&F#1 03.

Letter 11: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#1)

Troy Constance, CEMVN-PM-W
U.S. Army Corps of Engineers
May 8, 2002
Page 3

CL&F#1 25 – Maintain oil and gas canal banks by placing the dredged material from maintenance operations in a fresh flotant marsh environment on adjacent spoilbanks to protect the fragile flotant marshes.

CL&F#1 26 – Reevaluate the Mississippi (70%)/Atchafalaya (30%) allocation at the Old River Control Structure. By reducing the flow of the Mississippi down the Atchafalaya, flooding problems in Morgan City, the Lake Verret basin and the flotant marshes in the Penchant basin would be alleviated. By changing the allocation, more river water would be available for the proposed river diversions along the Mississippi River.

CL&F#1 27 – Implementation of CWPPRA Project TE-43 should be given high priority.

CL&F#1 28 – The Corps of Engineers should be required to stabilize the banks of the GIWW, Avoca Island Cut-off Channel and the Bayous Boeuf, Chene and Black projects with the dredged material received during annual dredging operations and rip rap. The maintenance of these channels should begin now and not wait for the year 2050.

Thank you for the opportunity to allow CL&F to submit comments to be included in the PSEIS. If you should have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely,

George A. Strain
Vice President

GAS/nkv

cc: Herman Crawford
Dr. William P. Klein, Jr., LCA PSEIS, CEMVN-PM-RS

CL&F#1 23: While the erosional effect of navigation generated waves is a significant concern, the regulation of navigational traffic is not within the purview of the USACE.

CL&F#1 24: Please see response to CL&F#1 02.

CL&F#1 25: Please see response to CL&F#1 06.

CL&F#1 26: Please see response to CL&F#1 02.

CL&F#1 27: Based on later comments we assume the request to implement TE-43 is a typographical error and the commenter intended to type TE-34. If so, please see response to CL&F#1 03.

CL&F#1 28: Please see response to CL&F#1 08.

Letter 12: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#2)

CL&F RESOURCES LP
CONTINENTAL LAND & FUR CO., INC.
111 VETERANS MEMORIAL BLVD., SUITE 500
METAIRIE, LOUISIANA 70005-3099
TELEPHONE 504/378-9378 TELECOPIER 504/378-4398

August 23, 2004

U.S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

Attention: Dr. William P. Klein

Re: LCA DPEIS
Ecosystem Restoration Study

Gentlemen:

CL&F#2 01

On May 8, 2002 Continental Land & Fur Co., Inc. ("CL&F") sent comments on the LCA Comprehensive Study. CL&F had several concerns regarding our floating marsh in Terrebonne Parish, LA. One concern was about the levee and the roles they play in protecting our floating marshes. I have been learning about the marsh since 1956 and have worked in it on a daily basis for 48 years. At that time the marsh had levees around each piece of marsh from 1.5 to 3 feet above the marsh with briers on most of them. There was a piece of marsh on my trapping lease that had turned into muck because there was very little grass on it. I used to wade this muck and shoot nutrias in the daytime; however in a few years it did recover and grass began to grow on it again. I have seen that same thing happen on other pieces of marsh on CL&F over the years, where the levees would hold the muck in place until the grass started to grow.

One of the things that helped me learn about the marsh was seismograph work. When I first started a wheel buggy was used. This buggy had wheels about 8 or 9 feet high and 4 to 5 feet wide. They were powered by two V8 motors. To steer the buggy, the operator would slow one motor down and speed up the other one, or put one motor in reverse and the other in forward. These buggies would liquefy the floating marsh. The operators would pull a pontoon with a drill rig on it, which would further tear up the marsh. However, the wheeled buggies did not breach the levees along the bayous or canals. In less than one year you could not tell where they had been. I stopped the use of all wheel buggies on CL&F land. I allowed track buggies on CL&F land. The track buggies started small, with a drill rig on a pontoon pulling behind the buggy. After a while the small buggy became a large buggy and a large pontoon drill rig. I stopped all pontoon drill rigs. A small drill rig was then used on a small buggy. The drill rig and buggy continued to grow in size. I stopped all large drill rigs on CL&F's property. In

CL&F#2 01: Noted. The May 8, 2002, letter was also referenced in CL&F's earlier public comment letter dated August 20, 2004 (CL&F#1). This letter, and responses to it, are included there.

Letter 12: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#2)

1997, seismograph work was performed on all of CL&F's property. Most of the work was done by airboat and some with small track buggies with drill rigs on them. At every canal or bayou crossing, the levee was repaired. We had aerial photographs made in 1997 before the work began and photos one year later. Almost all evidence of the work was gone. More photographs were taken in 2000 and there was not any evidence of the seismic work.

Go into an oil well canal where there is a break in the levee, the canal will be silted in with peat and floating marsh material. A canal that was 80 to 160 feet wide and 8 feet deep, you will stir up the slush (peat) with an outboard. Go to a canal when there is no break and the canal usually will be 8 feet deep. Sometimes in the entrance (and only the entrance) of the canal you may find some sediment from the river. Go to an opening in the canal, when the water or tide flows out, you will see pieces of float coming out. Throw a fishing line in the water; it will be full of grass roots and peat. Put a net down and see how much peat you have in it. When the water goes in, it is clean. I believe all the floats and peat coming out of the marsh is some of the cause of the marsh deterioration. In places where there is some river water going into the marsh you get about one tablespoon of sediments in the marsh and lose about five gallons of peat. I believe there is more floating marsh material coming out of the air than out of the water. When I go to my camp, I always have to wash dust off my table. When there is sand going into the marsh, all I have ever seen it make is a mineral marsh or levee. If you cut a piece of marsh and lift it up, the most fragile part of it is the bottom. If you put it in a vat of water and run water under it, it will deteriorate before long. When a piece of float comes out in the canal and the water runs under it, the same thing happens. In 1972, the water came up over 90% of all the levees on CL&F's property and stayed over all the levees for several years. The water level has not been below the 1972 water level since. In 1973, the cane farmers at Bayou Black started building pumps to pump out their cane fields. There was a lot of rain for the next few years. The rainwater stayed in the marsh and helped kill the grass; even though the water was well over the levees.

When I go into the marsh to check how far river water reaches the interior marsh, I found it only went about 75 to 150 feet from the edge of the canal. When the water level rose, the sand and heavy silt would fall out along the bayou and canals to form the levees and the peat and little stuff would fall out and make the floating marsh. I came to a conclusion that that was how nature created floating marsh.

When you dig a canal in the marsh you don't build a levee on top of the marsh, it starts at the clay under the marsh and comes up. It will spread under the float and come up above the float. This seals the material under the float and anchors the float to the levee. Again, this is close to how nature created floating marsh.

Letter 12: Mr. George Strain, Continental Land & Fur Co., Inc. (CL&F#2)

08/23/2004 14:36 FAX → HERMAN CRAWFORD 009

U.S. Army Corps of Engineers
August 23, 2004
Page 3

Now a days we aren't allowed to restore levees. Most levees have subsided back to marsh level. Some of the levees are over 40 years old and most of them have floating marsh attached. The levees were originally 75-125' feet wide and 2-3' high. When a levee has a break the adjoining marsh is either gone or on its way. We have a healthy self-sustaining floating marsh covering about 7,000 acres in Sections 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, 36; T18S, R15E that has levees, but no sediment input and very few ponds. In Section 16, T18S, R12E, there is a piece of marsh where river water runs through almost everyday. The ponds there have enlarged and the marsh is disappearing.

The oil companies could maintain the levees if it was not for the mitigation required by the agencies for stabilizing the levees. They require more mitigation instead of giving credit for the marsh the stabilization protects and creates.

CL&F#2 02

Think of what happened when Hurricane Andrew came through. Where there were levees in some places the marsh was pushed on top of existing marsh. Some places had the "accordion" effect. Where there were no levees, there were some places where there was no marsh left.

Some of the events I have noticed that causes marsh loss: high water from rain and Atchafalaya River, lack of levees, hurricanes, boat traffic, drought, nutrias—And other causes. I know there are a lot of different kinds of marsh and they need different kinds of care. I know a "little" about our floating marsh. The floating marshes need levees to protect and sustain them or they will be lost.

Sincerely,

Herman L. Crawford

Herman L. Crawford
Land Manager

P.S. All the literature I've read and people I've talked with agree that CL&F's marsh is a peat marsh. It floats, just ask anyone who has ever tried to walk on it. If all the natural levees and man made levees attach to the clay and extend above the float and are attached to these marshes, what is going to hold this "marsh blanket" in place when the levees are gone? I wish someone would explain this to me. I'm not talking about marsh loss from hurricanes and tropical storm winds. I'm talking about the 35 to 40 mile an hour winds that come in the fall and spring of each year.

08/23/2004 16:25 5045758251 HERMAN CRAWFORD PAGE 01

CL&F#2 02: Many spoil banks are considered jurisdictional wetlands. Public interest and 404(b)1 reviews look for the least damaging, most practicable alternative. The importance of spoil bank restoration is specific to each location and handled during permitting on an individual basis.

Letter 13: Mr. Tim Dantin – EIS (TD-EIS)

Tim Dantin

178 East 54th Street
Cut off, LA 70345

Phone 985-632-7174

August 05, 2004

William P. Klein Jr.
CEMUN-PM-RS
PO Box 60267
New Orleans, LA 70160-0267

Dear William,

TD-EIS 01 This letter is impact statement on our coast.. URGENT!!! Our coast is washing away Our dead ancestors in the cemetery in Leeville is falling into the bayou. Suggestion, rebuilt the barrier Island the start filling in the marsh WOW all this with just a High School Education.. Don't worry about destroying the ego system it's almost gone. Forget the study rebuilt the land . Do something for your check. Sorry if this upset you but too bad. This land is my land I been going to coastal meeting and reading study for 35 years and still watching the coast wash away.

TD-EIS 01: Comment noted.

Letter 14: Mr. Tim Dantin – Main Report (TD-MR)

Tim Dantin

178 East 54th Street
Cut off, LA 70345

Phone 985-632-7174

August 05, 2004

Tim Axtman
CEMUN-PM-C
PO Box 60267
New Orleans, LA 70160-0267

Dear Tim,

TD-MR 01

This letter concerns the rebuilding our barrier Island and saving our wetlands. Born and raised on the bayou and seeing the land loss upsets me. Nothing is being done. For 35 years I been watching study after study and acre after acre wash away.. Looking at the cemetery in Leeville just falling in the water. And still another study. Tim maybe when you die or your wife or even your kids. You can call us and we can you pick them up in our truck and we can just throw them off the Leeville bridge like our ancestors are just being washed away. I know you reading this letter and saying "I wonder what I'm having for lunch today" But you people must ACT NOW. Do something.

Sincerely,

Tim Dantin

P.S. People are laughing at yaill

TD-MR 01: Comment noted.

Letter 15: Mr. David W. Frugé, Louisiana Department of Natural Resources, Office of Coastal Restoration and Management (LDNR-CRM)

State of Louisiana

KATHLEEN BABINEAUX BLANCO
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL RESTORATION AND MANAGEMENT

August 23, 2004

Dr. William P. Klein
Environmental Planning and Compliance Branch
U.S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

RE: **C20040312,** Solicitation of Views
New Orleans District, Corps of Engineers
Direct Federal Action
Draft Programmatic Environmental Impact Statement (DPEIS) for the Louisiana Coastal Area (LCA) Ecosystem Restoration Study**, Coastal Louisiana**

Dear Dr. Klein:

LDNR-CRM 01

We have reviewed your July 1, 2004, Letter To Interested Parties and the accompanying DPEIS, and offer the following preliminary comments for your consideration. We are aware that extensive comments on the DPEIS have already been transmitted to you by the Department of Natural Resources' Coastal Restoration Division. This letter supplements that input and addresses aspects of consistency with the Louisiana Coastal Resources Program (LCRP). As you are aware, this Programmatic EIS involves many complex elements and projects for which detailed plans are not completely developed. Therefore, we anticipate the need for a phased Consistency Determination approach to satisfying the requirements of Section 307 of the Coastal Zone Management Act of 1972, as amended, and as described at 33 CFR 930.36(d). Under that approach, a Consistency Determination would be submitted for our review concurrently with the completion of each planning phase, as final plans for a particular project or phase are completed.

LDNR-CRM 02

The discussion under 2.9.2.6 on pages 113 and 114 should be revised to better reflect the current situation regarding beneficial use of dredged material in the New Orleans District. For example, that discussion indicates that approximately 14.5 million cubic yards (mcy) out of 70 mcy dredged annually in the District is used beneficially. Much of that material, however, goes to uses of questionable benefit, such as single point discharge in open water. A more meaningful breakdown might be acres of marsh created, or other tabulation by type of beneficial outcome.

The first paragraph, fifth line, on page 113 states "Within the O & M program, . . . is a minimal percentage

COASTAL MANAGEMENT DIVISION
P. O. BOX 44487 • BATON ROUGE, LA 70804-4487 • 617 N. THIRD STREET • 10TH FLOOR • BATON ROUGE, LA 70802
PHONE (225) 342-7591 • FAX (225) 342-9439 • WEB http://www.dnr.state.la.us
AN EQUAL OPPORTUNITY EMPLOYER

LDNR-CRM 01: Comment noted. Feasibility-level detailed decision documents will be developed on a project-by-project basis for each of the near-term critical restoration features. On a project-by-project basis, a consistency determination would be requested to fulfill the requirements under Section 307 of the Coastal Zone Management Act of 1972. Coordination has been initiated with LDNR regarding the need for a phased Consistency Determination approach to satisfying the requirements of Section 307 of the Coastal Zone Management Act of 1972, as amended and as described in 33 CFR 930.36(d). Under this approach, feasibility-level detailed decision documents will be developed on a project-by-project basis for each of the near-term critical restoration features. On this project-by-project basis, a Consistency Determination would be submitted for review and to fulfill the requirements under Section 307 of the Coastal Zone Management Act of 1972.

LDNR-CRM 02: The CEMVN uses 25 percent-35 percent of the dredged material removed annually from maintenance of Federally-authorized navigation channels beneficially to create/restore wetland; to create/maintain islands for colonial nesting seabirds; to restore barrier islands; to nourish wetlands; to stabilize banklines; and/or to nourish shorelines. Between 1976 and 2003, the CEMVN has created/restored approximately 18,000 acres of coastal habitats, approximately 11,200 acres of which are wetlands.

The discussion of current O&M dredging and the amount of dredged material currently incorporated in beneficial use actions provides an overall estimate of the scope of these programs and the relative amount of beneficial use already in place. The beneficial use program would perform cost-benefit analyses and engineering design studies for each specific project to ensure the most effective techniques are exploited. Existing beneficial use actions may be enhanced or improved based on the engineering and ecological investigations performed under the beneficial use program.

Letter 15: Mr. David W. Frugé, Louisiana Department of Natural Resources, Office of Coastal Restoration and Management (LDNR-CRM)

LDNR-CRM 03

increase above the O & M Base Plan . . ."; we know of no maintenance dredging case since the LCRP was established whereby beneficial use was accomplished in coastal Louisiana above the O & M Base Plan that did not involve supplemental monies from a partner. Regarding the last line in that paragraph, we have two concerns. First, we understand that Continuing Authority Program (CAP) funds have been occasionally diverted by Corps of Engineers' Headquaters to reduce the backlog of Construction General projects. Second, while it is true that WRDA allows for the appropriation of $15 million/per year for Section 204 funding, it is our experience that no more that $2 million/per year is ever appropriated except for special projects where "directed spending" is mandated by Congress. Despite these concerns, we strongly support the proposed dramatic increase in beneficial use to benefit Louisiana's coastal resources.

LDNR-CRM 04

We appreciate the opportunity to review and provide comments on this most important step in restoring the coastal wetlands and ecosystem of Louisiana. If you have any questions concerning this determination, please contact Jeff Harris of the Consistency Section at (225)342-7949 or 1-800-267-4019.

Sincerely,

David W. Frugé
Administrator

DWF/JH/bgm

cc: Gerry Duszynski, DNR
Jean Cowan, DNR-CRD
Fred Dunham, LDWF, Baton Rouge, LA
Richard Hartman, NMFS, Baton Rouge, LA
EPA, Dallas, TX
USFWS, Lafayette, LA

LDNR-CRM 03: There are a number of cases where the CEMVN routinely utilizes dredged material in a beneficial manner at costs above the O&M Base Plan without supplemental funding from a non-Federal sponsor. CEMVN currently places dredged material removed during maintenance of the bar channels of South Pass, Tiger Pass, Barataria Bay Waterway, Freshwater Bayou, and Mermentau River beneficially at 100 percent O&M cost and without supplemental funding from a non-Federal sponsor instead of the "least costly" ocean disposal alternative. Also, dredged material from maintenance of the Mile 3.4 to Mile –2.0 reach of the Mississippi River-Gulf Outlet is placed on Breton Island at one hundred percent cost as part of a plan to restore the island in lieu of the "least costly" ocean disposal alternative.

LDNR-CRM 04: The funding relationship between ongoing O&M for navigation projects and the incremental costs associated with beneficial use projects described in this section is based on the projected funding structure anticipated for these types of projects. Actual funding mechanisms will be determined by the nature of appropriations approved by Congress under WRDA and other funding authorizations.

Letter 16: Mr. Ed J. Doody (EJD)

July 27, 2004
4 Brittany Place,
Arabi, La.70032

Mr. Tim Axtman, CEMVN-PM-C
P.O. Box 60267
New Orleans La. 70160-0267

Subject: Comments on LCA Ecosystem Restoration Study, July 2004

Dear Sir;

EJD 01

I object to having the $107 million project, identified as "MRGO environmental restoration features." included in the LCA eco-system study because it is nothing more than a plan to keep the Mississippi River Gulf Outlet (MRGO) open permanently. The Corps of Engineers (COE) is proposing to spend all of this money as a method of reducing the future costs of dredging the channel so it can be kept open for use by ocean going vessels. This plan doesn't restore anything!

The southern and western rims of Lake Borgne have been nearly washed away by the four-six foot high waves from ocean going vessels over the past forty years. In studies leading to the Coast 2050 Plan, Dr. Sherwood Gagliano wrote, "There is a need to construct barrier islands along the southern and western shores of Lake Borgne to absorb waves before they reach the hurricane protection levee. Without remedial action, the shore of Lake Borgne will break into the MRGO and thus hurricane protection levees will be directly exposed to wave erosion and storm surge." In subsequent writings, Gagliano proposed that the barrier islands be constructed of material dredged from borrow holes created on the bottom of the lake. Gagliano urges the use of native soil, not rock, to build the barrier islands.

The COE's plan proposes to line the lake rims with ribbons of boulders but omits the construction of substantial barrier islands built of earth. The COE has tried rocks before and area residents report that the boulders sink out of sight in a matter of months; the marsh land in that area is too soft to support the weight of the rock. The COE is not proposing a solution to the problem of saving the lake. This is a waste of taxpayers' money, according to the Civil Engineers whom I have consulted.

St. Bernard needs the massive barrier islands of earth, described by Dr. Gagliano, to protect us from a hurricane tidal surge that otherwise one day will wash away the unprotected MRGO levee in this area. But as long as the wake from large vessels continues to tear away at the marsh, neither the barrier islands nor a ribbon of rock will protect us. In order to stop the destruction caused by the vessels, the MRGO must be closed to these vessels.

EJD 02

EJD 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

EJD 02: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 16: Mr. Ed J. Doody (EJD)

EJD 02 (Continued)

Placing riprap along the north bank of the channel is another waste of money. This part of the project can reduce only the loss of north bank wetlands. It will not prevent the continued destruction of the wetlands on the south bank of the channel and subsequent damage to our protection levee, I repeat, the only way to stop the loss of St. Bernard Parish wetlands is to close the channel to the vessels that cause the damage. Dr.Gagliano, L.S.U.'s Dr. Rex H. Caffey as well as eco-system experts with state and federal agencies, i.e. the E.P.A., D.N.R., and Wildlife and Fisheries, the Lake Pontchatrain Basin Fdn., the Coalition to Restore Coastal Louisiana have joined with the Louisiana Legislature in agreement that the MRGO must be closed.

More than 46,000 acres of St. Bernard Parish wetlands already have been destroyed by the MRGO. "Blackie" Campo and his descendants remember, but will never again see the beauty that was once Shell Beach. That productive marshland, which also protected us from storm surge, is gone and can never be replaced. Many of our fishermen, trappers and oystermen have been forced out of business, forced from the land of their ancestors, because of damage caused by the MRGO. And, with this project, the COE proposes spending $107 million more to continue this cultural and economic destruction; to continue to impose the threat of hurricane flooding on the lives, property and infrastructure of the 150,000 people who live in Orleans, Plaquemines and St. Bernard parishes.

EJD 03

According to the COE's senior project manager, Al Naomi, sections of hurricane protection levees in St. Bernard and throughout the metropolitan area, are two to four feet below authorized grade, but there are no funds to raise them. Making matters worse, Dr. Roy Dokka, of LSU's Spatial reference center, and others, are warning that, because of subsidence, the benchmarks used to determine levee elevations are themselves six inches to a foot too low. Work on the massive SELAS drainage improvement for Orleans and Jefferson parishes has been stopped because there are no funds. The hurricane levee forming the "neck of the funnel," that protects residents of New Orleans East is at least two feet lower than the south levee protecting residents of St. Bernard and the Lower-Ninth Ward. These and other facts warn of disaster but are unheeded. Predicated on dishonest economic impact reports tasked from the COE, Congress approves money only to keep the MRGO open to benefit foreign owned maritime firms who now make fewer than 150 trips per year using the MRGO. This is disgraceful!

EJD 04

Our area needs the $107 million earmarked for the so called MRGO restoration project, not for placing riprap, but to lift the sub-standard hurricane levees throughout the metro-area, to construct the barrier islands needed in Lake Borgne, to complete work on the SELAS drainage project and to construct a flood control gate at Bayou La Loutre. This is the restoration that we need. Start it by ending the dredging and closing the MRGO.

Sincerely:

Edward J. Doody

EJD 03: Please see General Response #1 regarding the proposed MRGO Restoration Feature. Additionally, as outlined in Section 6 of the LCA Main Report, the Corps is required to coordinate and comply with various statutory authorities including: environmental laws, regulations, Executive Orders, policies, rules and other guidance. This includes consideration of public safety and public use of water resources. Protection of vital socio-economic resources is one of the critical needs elements addressed by the near-term LCA Plan (Critical Needs Criterion #4). The proposed restoration features in the LCA Plan address the need to protect such resources as cultures, communities, infrastructure, business and industry, and maintain flood protection.

EJD 04: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 17: Mr. William J. Doré, Doré Energy, Inc. (DORE)

Doré CORPORATION
P.O. Box 67 • Sulphur, LA 70664
Telephone (337) 583-5214 • Fax (337) 583-5220

August 23, 2004

U. S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

Attention: Mr. Tim Axtman
CEMVN-PM-C

RE: Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study

Gentlemen:

DORE 01

This correspondence is respectfully submitted on behalf of Doré Energy, Inc., owners of approximately 18,000 acres of wetlands in Cameron Parish, Louisiana. Doré's property is adjacent to the Sabine Wildlife Refuge and the two properties share a common boundary. As landowners of a largely undeveloped tract of land, Doré is concerned about the direction that coastal restoration is taking with regard to funding of coastal restoration projects. Doré Energy has a property management plan and is practicing good stewardship for its property. It is committed to cleaning up environmental damage and Doré has implemented a restoration program for portions of the property that have been damaged by oil and gas activities.

Doré Energy is very concerned about the continued loss of its property as a result of saltwater intrusion and man-induced alterations to the regional hydrology. Doré is very supportive of actions that would significantly reduce land loss in Cameron Parish. It is our perception that southwest Louisiana is being ignored or overlooked when coastal land loss projects are being considered for funding. While other areas are benefiting from State and Federal dollars to restore the coast, Doré does not even get the benefit of a tax break for the substantial outlay of funds that the company is spending to restore the property to its natural condition.

We appreciate the opportunity to make these comments.

Sincerely yours,

William J. Doré
President

DORE 01: Please see General Response #11 regarding the regarding LCA restoration efforts in Subprovince 4.

There are a number of restoration measures in the LCA Plan available for use in Subprovince 4. The programmatic beneficial use of dredged materials affords the opportunity to place dredge material to restore marsh. Programmatic modifications to existing structures allow reevaluation of existing water control and navigation channels for potential change to facilitate restoration. The recommendations also include a large-scale, long-term study of the entire area for better water and sediment management. Finally, demonstration projects that further science and technology and produce real ecosystem benefits are available to the area.

Letter 18: Mr. Ken Babcock, Ducks Unlimited (DU)

DUCKS UNLIMITED

SOUTHERN REGIONAL OFFICE
193 Business Park Drive, Suite E
Ridgeland, MS 39157-6026
(601) 956-1936 Fax (601) 956-7814
www.ducks.org

August 23, 2004

Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Mr. William P. Klein, Jr.
CEMVN-PM-RS
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Axtman and Mr. Klein:

Thank you for affording the public and other interested parties an opportunity to comment on the draft Programmatic Environmental Impact Statement (DPEIS) and the draft Louisiana Coastal Area (LCA) Ecosystem Restoration Study. Ducks Unlimited staff has reviewed both of these documents and offer the following comments for your consideration. I am addressing our comments on these two documents to both of you as many of our comments pertain to both reports.

Ducks Unlimited is a grassroots, not-for-profit conservation organization incorporated in 1937 with more than 1 million supporters across North America, including 24,600 members in Louisiana. The Gulf Coast of Louisiana, Texas and Mississippi constitutes one of the 5 highest priority regions identified within Ducks Unlimited's International Conservation Plan (ICP). As a result, Ducks Unlimited is keenly interested and actively involved in habitat conservation on Louisiana's coast. We have staff stationed in Monroe, Lafayette and Walker and spent $3,484,725 on waterfowl and wetland habitat conservation in Louisiana this past year. Ducks Unlimited is also a cooperating organization in the America's Wetland: *Campaign To Save Coastal Louisiana* and has made a significant pledge toward coastal conservation in Louisiana during the life of this campaign.

DU 01

Ducks Unlimited supports the Tentatively Selected Plan (TSP) as outlined in the LCA Ecosystem Restoration Study (Study). The goal of the Study is to reverse the current trend of degradation of the coastal ecosystem, and as stated therein, the TSP addresses only the most immediate and critical needs of this ecosystem. As such, we wish to emphasize that this 10-year, $2 billion TSP should be considered a "down payment" toward the overall $15 billion need identified in Coast 2050. Ducks Unlimited would also like to underscore the need to ultimately fund all of the restoration features identified through the collective efforts of the public and state/federal agencies at the subprovince level during the LCA Core Strategies iteration of the LCA process. This list of mutually endorsed restoration features includes strategies other than the deltaic process and geomorphic structure projects identified in the current LCA report. We also encourage the development of a streamlined permit and implementation process for those restoration features not included in the LCA, but for which other funding sources may be available for construction.

DU 02

LEADER IN WETLANDS CONSERVATION

DU 01: Comment noted.

DU 02: Comment noted.

Letter 18: Mr. Ken Babcock, Ducks Unlimited (DU)

DU 03

The U.S. Army Corps of Engineers and the State of Louisiana are to be applauded for the adaptive management approach outlined in the LCA, which facilitates learning during implementation. The Science & Technology Program (STP) has potential to resolve remaining uncertainties, but we urge that demonstration projects not be restricted to only those restoration measures with coast-wide application. We would like to point out that the Criterion 2 uncertainties that eliminated most subprovince 4 restoration features from the LCA are not likely to be resolved by any of the 5 demonstration projects specifically recommended in the document, nor will any demonstration project outside of subprovince 4 likely resolve those uncertainties. The LCA Plan recognizes inherent differences in regions of the coast by designating 4 subprovinces, and we encourage demonstration projects to be applied and evaluated at that scale, or at least at the scale of the "ecosystem" planning units defined in the LCA plan – Chenier Plain and Deltaic Plain.

DU 04

Ducks Unlimited also strongly supports the application of freshwater and sediment introductions as key to restoring the dynamic nature of wetlands in the Deltaic Plain. We are particularly encouraged by the consideration given (through feasibility studies) to eventual application of large-scale, long-term initiatives to more fully utilize waters of the Mississippi River in restoring the coast.

Of a more specific nature, we offer the following comments:

DU 05

•In the **Causes of Wetland Loss** section(s), the description of saltwater intrusion is incomplete in both documents, and presents saltwater intrusion only in light of prograding/degrading wetlands in the Deltaic Plain. Saltwater intrusion is defined as "when freshwater flows decrease in volume, allowing saltwater.....to move inland or upstream. The rate of saltwater intrusion depends on the amount of freshwater flows traveling downstream and the water depth in the wetlands, channels, and/or canals." We suggest that this definition be revised to reflect that saltwater intrusion can occur with or without changes in downstream freshwater flows, and can be principally caused by man-made alterations to hydrology that provide unnatural connections of fresh/intermediate marsh to high salinity waters (e.g., ship channels and canals in the Chenier Plain).

DU 06

•the **Affected Environment** section of the DPEIS includes 6 paragraphs and a table specific to Essential Fish Habitat (EFH) and its statutory requirements, in addition to other text on fisheries resources. Migratory birds are treated only generically in the introduction of this section. There is no mention of the Migratory Bird Treaty Act (as amended), which provides statutory authority for protection of migratory birds "and their environment." There should also be recognition given to the North American Waterfowl Management Plan (NAWMP), a multi-nation agreement for the management of waterfowl that specifically identifies coastal Louisiana as part of one of the most important regions in North America for the maintenance of continental waterfowl populations. A copy of the draft 2004 NAWMP is attached for your reference.

DU 07

•the **Environmental Consequences** section of the DPEIS should explicitly recognize the relationship between habitat in coastal Louisiana and the condition of migratory bird populations elsewhere. Both the Study and the DPEIS appear to fall short of an opportunity to use migratory birds to help sell this plan to the nation.

DU 03: There are a number of restoration measures in the LCA Plan available for use in Subprovince 4. The programmatic beneficial use of dredged materials affords the opportunity to place dredge material to restore marsh. Programmatic modifications to existing structures allow re-evaluation of existing water control and navigation channels for potential change to facilitate restoration. The recommendations also include a large-scale, long-term study of the entire area for better water and sediment management. Finally, demonstration projects that further science and technology and produce real ecosystem benefits are available to the area. Results of large-scale and long-term studies, as well as implementation of adaptive management techniques, may also result in development of additional restoration projects.

DU 04: Comment noted.

DU 05: This section of the report has been revised to clarify the roles and relative contributions of natural and human induced causes of land loss and shoreline erosion.

Letter 18: Mr. Ken Babcock, Ducks Unlimited (DU)

Thank you for providing the opportunity to comment on both the draft Programmatic Environmental Impact Statement (DPEIS) and the draft Louisiana Coastal Area (LCA) Ecosystem Restoration Study. In summary, Ducks Unlimited supports the TSP as outlined in the LCA Ecosystem Restoration Study and contends that it is a significant near-term step or "down payment" toward the longer term goal of reversing the current trend of coastal wetland loss and the concomitant effects on the environment, the economy and the culture of Louisiana. We look forward to release of the final version of both of these documents in the coming weeks.

Sincerely,

Ken Babcock
Director of Operations

cc: Dr. Bruce Batt
Dr. Scott Yaich
Dr. Tom Moorman
Scott Sutherland
Ross Melinchuk
Dr. Curtis Hopkins
Hugh Bateman
Chad Courville
Barry Wilson
Bob Dew

DU 06: Table 6-2 lists relevant Federal statutory authorities that establish regulatory compliance standards for environmental resources potentially impacted by the proposed LCA Plan. This table identifies the Migratory Bird Conservation Act, The Migratory Bird Treaty Act, and the Migratory Bird Habitat Protection Executive Order #13186. Section 6 generally describes the consistency of the LCA plan with other efforts. Additional language will be added to the Final PEIS to recognize the North American Waterfowl Management Plan.

DU 07: The Final PEIS will include additional descriptions of the relationship of coastal Louisiana habitat and migratory birds.

Letter 19: Mr. Charles Earnest (CE)

Statement to U.S. Army Corps of Engineers Public Hearing
Regarding
Louisiana Coastal Area Ecosystem Restoration Plan
August 12, 2004
Memphis, TN

Presented by:
Charles Earnest, President
Elk Chute Drainage District of Missouri
4949 Hwy C
Steele, MO 63877

I am Charles Earnest. I am a Missouri farmland owner and manager. I speak as the President of the Elk Chute Drainage District of Missouri. Our District contains some 45,000 acres in the Bootheel of Missouri. Members of our District very much appreciate the vital contribution the Corps of Engineers has made to our own area and to the entire Mississippi Valley in terms of flood control and safe, dependable river commerce.

Colonel Clyde Southern of Drainage District #1 of Pemiscot County addressed this hearing and I wish to associate myself with his remarks. He has been thorough and succinct in describing the reservations that responsible local authorities upstream of the Louisiana Coastal Area Restoration Plan have regarding the plan. In fact, Clyde used the Elk Chute District's problems with the fat pocketbook pearly mussel in his statement. The Corps took three years to perform basic maintenance on a vital channel and at least a year's delay was caused specifically by the mussel. Well, a certain population of mussels were transported and preserved for posterity, but at least two years of the three year delay in ditch maintenance caused severe flooding and crop loss. People lost crops, their farm business and saw damage to their homes because of the fat pocketbook pearly mussel. The cruel irony is that the damn things are all over the place and the more often ditches are maintained, the better the environment becomes for mussels. If you really wanted more mussels, the Corps would dig more ditches more often. But once established, the environmental rules don't change regardless of conditions.

Our District does not seek to prevent conservation or even restoration of Gulf Coast waterfront property. We are properly concerned with the unspecified but implied economic, business and regulatory impacts of this project. While the project area is described as four "sub-provinces" on the Louisiana coast, the project may have implications well beyond this small geographic area. Strategic thinkers three hundred years ago recognized the mouth of the Mississippi River as a choke point for North America. So I expect county commissioners from Chattanooga to Pittsburgh, Chicago and Pierre will take note of this project as it comes to their attention.

CE 01 I note for the record some items of concern for our own District and area. What restrictions, regulations or taxes are placed on: fertilizer use, farm herbicide/insecticide use, urban and suburban pesticide runoff, cattle/hog/poultry operations, city development, industrial

CE 01: Comment noted. It is not within the scope of the LCA Study or within the authority of the USACE to recommend a funding mechanism for LCA implementation. The LCA Plan will be authorized by Congress, who will in turn determine the appropriate funding mechanism for this effort.

Letter 19: Mr. Charles Earnest (CE)

CE 01 (Continued)

development, river ports or navigation on any stretch of river?

Is there a Restoration Plan - related funding mechanism? For instance, a tax on particular products like gasoline, chemicals, nitrogen fertilizer? Taxes or use fees on city runoff, sewage projects or utility bills?

CE 02

To the extent that hypoxia preceded industrialization, what could be the standard of success: no hypoxia at all or an no-target effort controlling non-point sources? Isn't land and sediment loss on the Gulf Coast due to the success of erosion control in agriculture in the entire Mississippi basin?

It may seem to the uninitiated that we are straining at gnats to ask such questions, but there is a not any uninitiated person in this room. Those folks are home getting their opinions from the Daily Show.

Unfortunately, our experience in the modern policy environment proves time after time that this exercise is only prudent and thoughtful. Defending our property, businesses, communities and families at the earliest possible opportunity is our best proactive and forward thinking strategy. Local and elected community leaders understand this viewpoint viscerally while out-of-area NGO's remain charmingly bewildered with our provincial attitude or are hostile to our responsible and authoritative concerns.

Good luck with your coastal restoration project. To the extent that the project remains a local Louisiana project I expect it to be successful. Should its environmental, regulatory and economic costs spread up the Mississippi Basin, I would expect you to hear from every Member of Congress, every state legislator and county commissioner from North Carolina to South Dakota.

Louisiana Coastal Statement 081204

CE 02: The LCA Study does not have a specific goal with respect to reducing hypoxia. Rather, it has an objective of helping to address the problem by reducing the amount of nutrients discharged from the Mississippi River into the northern Gulf of Mexico. For a discussion of Federal efforts to address Gulf hypoxia, see the "Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico." The Plan can be located via the Internet at: http://www.epa.gov/msbasin/actionplan.htm. The LCA Plan measures its relative effect in affecting hypoxia by measuring against the current nitrogen reduction goals with a potential maximum of 30 percent of that target reduction.

The direct anthropogenic cause of the reduction in sediment input to the deltaic plain of coastal Louisiana is the construction of levees on the Mississippi River, not changes in sediment loads in the river due to upstream agricultural practices and other actions. While changes in the sediment load in the Mississippi River could affect the performance of restoration measures, such changes would only be relevant in cases where riverine inputs to deltaic wetlands have been restored.

Letter 20: Ms. Sidney Coffee, Governor's Office of Coastal Activities (GOCA)

PM-C

KATHLEEN BABINEAUX BLANCO
GOVERNOR

State of Louisiana
OFFICE OF THE GOVERNOR
Baton Rouge
70804-9004

POST OFFICE BOX 94004
(225) 342-7015

August 12, 2004

U.S. Army Corps of Engineers
P.O. Box 6267
New Orleans, LA 70160-0267

Attn.: Colonel Peter J. Rowan

Re: Fundamental Issues with Draft LCA Plan

Dear Colonel Rowan,

First let me say that the State of Louisiana appreciates the Corps' efforts in producing this draft Study toward the objective of having a completed Chief of Engineers' Report delivered to Congress by the deadline of December 31, 2004. With very tight schedule requirements, your office has managed to meet all schedule benchmarks in the process so far, and we're confident that record will continue.

In order to continue on a schedule that brings us to our objective, representatives of the State of Louisiana, including the Governor's Office of Coastal Activities (GOCA), The Department of Natural Resources (LDNR), and the other member agencies of the Coastal Wetlands Restoration and Conservation Authority are in the process of reviewing the Draft Louisiana Coastal Area Ecosystem Restoration Study (Study), and plan to provide comments on the Study prior to August 23rd. We expect these comments to contain numerous editorial changes and clarifications that will improve the Study and its ability to convey both the challenges facing the Louisiana Coastal Area and our plans to address those challenges. While these suggested improvements are important to the future success of the Program, our initial review of the plan has produced a list of items that address what the State of Louisiana considers fundamental issues (enclosed). These are issues that we feel could be detrimental to the success of the LCA Program, and, consequently, must be resolved as soon as possible.

Letter 20: Ms. Sidney Coffee, Governor's Office of Coastal Activities (GOCA)

Colonel Peter J. Rowan
Page 2
August 13, 2004

In order to make sure we adhere to our already tight schedule, we'd like to arrange a meeting as soon as possible among representatives of the Corps, LDNR, and GOCA to discuss these issues. I understand that this is short notice, but it is very important that we resolve these issues prior to the end of the public comment period. Pat Forbes will contact you today to arrange a conference call for Monday, August16.

Sincerely,

Sidney Coffee
Acting Executive Assistant
Governor's Office of Coastal Activities

c: Randy Hanchey
Gerry Duszynski
John Saia

Letter 20: Ms. Sidney Coffee, Governor's Office of Coastal Activities (GOCA)

Fundamental Issues
LCA Study

Personnel with the Governor's Office of Coastal Activities and the Department of Natural Resources have reviewed the LCA Study and are preparing editorial comments on the Plan for submission to the Corps of Engineers. In the process of performing this review, however, several concerns have surfaced regarding some fundamental issues that should be resolved with the Corps immediately. In the interest of addressing these issues, GOCA and DNR personnel have jointly developed the following list describing specific concerns with the Draft LCA Study.

Executive Summary

GOCA 01

1. page i – One stated purpose of the LCA Study is to "Present a strategy for addressing the long-term needs of coastal Louisiana Restoration beyond the near-term focus of the Louisiana Coastal Area Ecosystem Restoration Plan." If this refers to the Large-Scale, Long-Term studies, the text needs to describe how these studies will address the long-term needs of the Coastal Restoration program, and what other activities will occur to fulfill the need for a "strategy for addressing the long-term needs of coastal Louisiana Restoration." Section 4.2.4 should include an additional paragraph that describes such a strategy, as follows:

GOCA 02

While this Program addresses the near-term critical needs of Coastal Louisiana and certain large-scale, long-term concepts, as described above, addressing Louisiana's coastal land loss problems will require a comprehensive, large-scale, long-term strategy. As such, the Program should continue development of a comprehensive plan that can guide future restoration efforts. This comprehensive plan should include restoration strategies for specific coastal Louisiana features and habitat type in each basin and sub-province and should include the results of the other Large-Scale, Long-Term studies as those studies are completed.

GOCA 03

This "Comprehensive Plan" should also be added to the Colonel's recommended List on MR-224.

GOCA 04

2. page viii – Environmental output of the program should be described in acres, not average annual habitat units (AAHU's). This convention should be used throughout.

GOCA 05

3. page x – There is a list of five potential demonstration projects that does not include the appropriate projects and/or the descriptions do not accurately reflect the chosen projects. The list should either be removed from the document, providing for demonstration project selection by an S&T group in the near future, or the list should be modified as described below:
   - Sediment sources for marsh creation and restoration of maritime forests
   - Long-distance sediment delivery via pipeline for marsh creation and nourishment
   - Pipeline canal restoration using different methods
   - Created marsh platforms in diversion outfall areas to maximize efficiency
   - Barrier Island restoration using offshore sources of sediment

Main Report

GOCA 06

4. There is no mention of the effects/influences of hypoxia or water quality in the Introduction.

GOCA 07

5. MR-21, Section 2.1 – The story in this section has become muddled. The short storyline is how does the natural delta function, what has happened to change the way the delta functions (levees, channels, and other man-made alterations), followed by the results of these changes to the natural system. Not following this storyline has led to results and causes being incorrectly stated. For example, this section erroneously lists several items as "Natural Causes" that are either not natural or not causes. Hypoxia and saltwater intrusion

GOCA 01: The FY05 budget guidance directs the identification of near-term restoration plan (10 years or so) and the initiation of large-scale studies of long-term concepts to identify long-range restoration actions. The magnitude and spatial scale of the long-term concepts proposed for study in the LCA Plan result in the consideration of long-range effects over the entire coastal area. The ultimate documentation of the findings of these studies, as well as the specified review of the LCA Plan at 5 year intervals, provides a basis for revision and submission of parts or all of the plan for additional or modification of authorization by Congress. As provided for in the LCA Plan, this process allows the development and adoption of a comprehensive restoration plan over time. The USACE is bound by this guidance; however, under "Views of the Local Sponsor" in Section 4 of the Main Report, the State has made their desires known.

GOCA 02: Please see response to GOCA 01.

GOCA 03: Please see response to GOCA 01.

GOCA 04: Current planning guidance for the USACE (ER 1105-2-100) states that ecosystem restoration outputs must be clearly identified and quantified in appropriate units. Although it is possible to evaluate various physical, chemical, and/or biological parameters that would result in an increase in ecosystem quantity and quality in the project area, the use of units that measure an increase in "ecosystem" value and productivity are preferred. The use of habitat units allows for the habitat suitability values as well as acres of habitat created to assess project benefits. Additionally, the total number of HUs is then divided by the number of years of the project life to calculate the average annual habitat units (AAHUs). These AAHUs are then used to compare the "with" and "without project" alternatives. Stating acres would understate the benefits and result in the incorrect assessment of $/acre as the measure of output.

Letter 20: Ms. Sidney Coffee, Governor's Office of Coastal Activities (GOCA)

GOCA 05: The descriptions of demonstration projects have been revised in the final report to highlight the specific nature of the uncertainties to be addressed. The report has been modified to state that execution of these demonstration projects may change, pending an assessment of the S&T Program. Specifics about the demonstration projects will be developed under the S&T Program and during engineering and design.

GOCA 06: While hypoxia was not discussed in the introduction, we believe it was covered adequately in both the draft Main Report and DPEIS. The introduction is intended to give an overview of the processes that have historically built and maintained the coastal ecosystem. More discussion of problems related to hypoxia and water quality can be found in Section 2.

GOCA 07: While it is correct that hypoxia is not a cause contributing to land loss, it does contribute to ecosystem degradation in coastal areas. To avoid the possibility that the discussion of hypoxia could be misinterpreted with respect to causes of land loss, the following sentence will be added after the first sentence in the first paragraph under 2.1.1.2 Hypoxia: “While hypoxia is not a cause of land loss in coastal Louisiana, it is highly relevant to the broader coastal Louisiana ecosystem.” We also agree that it is not accurate to suggest that hypoxia and sediment reductions are the result of “natural” causes. Accordingly, those sections will be placed under 2.1.2. Human Activities Influencing Land Loss and Ecosystem Degradation. There are both natural and human-induced causes for saltwater intrusion (e.g., saltwater wedge naturally comes up the Miss River during the dry months of the year), although we are primarily concerned about such human induced impacts of canals. Hence we will include saltwater intrusion in the section about "Human activities…"

Letter 20: Ms. Sidney Coffee, Governor's Office of Coastal Activities (GOCA)

GOCA 07 (Continued)

are not natural, and hypoxia is not a cause "contributing to land loss." Hypoxia is a result of human activities, fertilizer run-off, and does not contribute to land loss. Saltwater intrusion is largely the result of the straightening and deepening of existing channels and the dredging of new channels through the marsh, mostly for navigation and oil and gas exploration and production. In addition to the above, the sections on relative sea level change, sediment reduction and subsidence are interrelated and should be discussed together. Furthermore, sediment reduction is not a natural cause, but results from human activities, namely, isolation of the floodplain from the river. GOCA 08

GOCA 09 Science & Technology Plan (S&T Program) Note: Correction of the items below will require consistency in the "Science and Technology" portion of the Main Report.

6. While there are numerous statements within the document about the importance to the Program of having a functionally independent S&T Program, there are multiple examples of reporting, coordination, and budget relationships described in the document that create a structure wherein the S&T Program is not functionally independent, but dependent on/reporting to the Program Execution Team (PET). By definition, the S&T Program must be a working partner with the PET, both working toward the same objective, but with different, cooperative, symbiotic roles. While responsiveness to implementation needs and goals is important, judgment of this responsiveness must be monitored by the various independent review panels, the Science Board, and, ultimately, Program Management, not the PET. GOCA 10

- 1.0 Para 2 – The first sentence is unnecessary and does not seem to have any relevance to the rest of the paragraph.
  - Listing of the PET in the last sentence is unnecessarily specific. The important point is the coordination between the Program and other parties that have an interest, a stake, or expertise the LCA. GOCA 11
- 1.2 – The second sentence of the last paragraph should be eliminated. S&T priorities should not be set by the PET. It is obvious that the efforts of the S&T Program must be focused on achieving the objectives of the LCA Program. Further stating that PET "needs" will be the basis for prioritization of the S&T Program removes the independence of the S&T Program that has been acknowledged as vital to LCA Program success. GOCA 12
- 1.3.1 – Mention of the PET in the last sentence is unnecessarily specific. The sentence should read "…independence in clear support of program objectives." GOCA 13
- 1.3.1.5 – This section fails to clearly describe the role of research in the overall S&T program. Rather, it focuses mainly on the control that the PET exercises over the S&T Program. The paragraph should include a description of the role of research, that it provides a lower cost, lower risk method of testing hypotheses and gathering information when uncertainties are greatest. The third sentence should read"…S&T Plan is guided by the stated objectives of the LCA Program. The last sentence of the paragraph should be removed. GOCA 14
- 3.0 – The phrase "…and responsive to the Program Execution Team" should be removed from the first sentence. It might be replaced with the phrase "… and focused on achieving Program objectives," but this is not really necessary because that is inherently the purpose of the S&T Program. GOCA 15
- 3.2.1.1 – The Director is submitting the S&T Program budget to the Program Manager. There is no need to pass the S&T budget through the PET. GOCA 16
- 3.2.1.2 – On the sixth bullet item, the phrase "In association with the Program Execution Team" should be removed. The S&T Program, including the S&T Office, the Science Board and the science Coordination Board, should take the lead in the conception and selection of demonstration projects and baseline studies. The PET should take the lead in designing demonstration projects, but that does not need to be mentioned here, since this is a listing of specific responsibilities of the S&T Office. GOCA 17

GOCA 08: Please see response to GOCA 07.

GOCA 09: The appendix has been revised to reflect that the S&T office will be responsive to program objectives instead of the Program Execution Team, although it is clear that there is a symbiotic relationship between the two program elements.

GOCA 10: Please see response to GOCA 09.

GOCA 11: Sentence has been revised to remove reference to PET.

GOCA 12: Sentence has been modified to explain that S&T Program priorities will be established on a coordinated basis to meet the science needs of the LCA Plan.

GOCA 13: Comment noted. The requested revisions have not been made because the USACE does not agree with the comment.

GOCA 14: The following sentence has been added to the paragraph: "The role of research in the S&T Program would be to lower costs and risks associated with new restoration techniques, and to provide new analytical tools for assessment of ecological processes and project performance." The last sentence has been removed.

GOCA 15: Sentence has been revised to remove mention of the PET.

GOCA 16: The paragraph has been revised for clarity.

GOCA 17: Bullet item has been revised as suggested.

Letter 20: Ms. Sidney Coffee, Governor's Office of Coastal Activities (GOCA)

GOCA 18

- 3.0 – The phrase "…and responsive to the Program Execution Team" should be removed from the first sentence. It might be replaced with the phrase "… and focused on achieving Program objectives," but this is not really necessary because that is inherently the purpose of the S&T Program.

GOCA 19

- 3.2.1.1 – The Director is submitting the S&T Program budget to the Program Manager. There is no need to pass the S&T budget through the PET.

GOCA 20

- 3.2.1.2 – On the sixth bullet item, the phrase "In association with the Program Execution Team" should be removed. The S&T Program, including the S&T Office, the Science Board and the science Coordination Board, should take the lead in the conception and selection of demonstration projects and baseline studies. The PET should take the lead in designing demonstration projects, but that does not need to be mentioned here, since this is a listing of specific responsibilities of the S&T Office.

GOCA 21

- 5.1 – In the second sentence, the words "project execution" should be replaced with "program." In the last sentence, the S&T Office is relegated to a role of deciding which S&T tool to use to address specific project needs. It is imperative that the S&T Program be involved in identifying and prioritizing the science and project needs of the program.

GOCA 22

- 5.3.1 – The first paragraph should be moved to section 5.3.7 or removed.

GOCA 23

  – It would be more appropriate for the fiscal and contracting persons to be located at Division offices, since the Program Management level personnel will be located there and the S&T Office will report directly to Program Management.

GOCA 24

7. Page A-42, Section 4.3.6: The description of the partnership between the S&T Program and the PET with respect to formulation of demonstration projects is inaccurate. It should be the responsibility of the S&T Director to determine the most appropriate way to address areas of uncertainty.

GOCA 25

8. The description of the Science Board appears to restrict the function of the Board to review of the work of the S&T Program. We suggest the following changes to clarify the role of the Science Board:
   a. Page A-23, 2nd full paragraph, 1st sentence: Change to " The role of the SB is to periodically review the S&T Program as well as the overall LCA program, as it relates to use of science and technology, and prepare reports providing recommendations …"
   b. Page A-23, bullets: Add the following bullet, "Provide reviews of how effectively the PMT is incorporating the output of the S&T program and the recommendations of the Science Board into the overall LCA Program, and make recommendations to better incorporate needed changes."

GOCA 26

GOCA 18: Comment appears to be a repeat. Please see response to GOCA 15.

GOCA 19: Comment appears to be a repeat. Please see response to GOCA 16.

GOCA 20: Comment appears to be a repeat. Please see response to GOCA 17.

GOCA 21: The text has been revised accordingly.

GOCA 22: Text has been removed.

GOCA 23: Text has been changed so that neither the specific location nor particular contracting mechanisms are dictated at this time.

GOCA 24: The S&T Director is responsible for determining the best way to address program uncertainties, but he should also work with the PET to ensure that assessments accurately reflect uncertainties as viewed by the PET. This ensures responsiveness to program goals and objectives. Paragraph has been revised for clarity.

GOCA 25: Sentence has been revised as suggested.

GOCA 26: Bulleted list has been revised to include these functions.

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

GULF RESTORATION NETWORK

Working to Protect and Preserve the Gulf of Mexico

338 Baronne Street, Suite 200 · New Orleans, LA 70112
Mailing Address: P.O. Box 2245 · New Orleans, LA 70176
Phone: (504) 525-1528 · Fax: (504) 525-0833
www.gulfrestorationnetwork.org

August 23, 2004

Mr. Tim Axtman
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Coastal Restoration Branch
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Axtman:

On behalf of the Gulf Restoration Network (GRN), a coalition of 50 local, regional, and national environmental, environmental justice, social justice and public interest groups dedicated to uniting and empowering people to protect and restore the natural resources of the Gulf Region, I would like to submit the following comments on the Draft Louisiana Coastal Area (LCA) Ecosystem Restoration Study Main Report (MR) and Programmatic Environmental Impact Statement (PEIS).

First of all, we would like to offer praise for some of the U.S. Army Corps of Engineers' (Corps) efforts so far. We were encouraged by the inclusion of the Guiding Principles for Plan Formulation in Section 3.2.1.2 of the MR and Section 2.2.4 of the PEIS. It is essential that we follow these principles in order to ensure that appropriate decisions are made as we all endeavor to protect Louisiana's precious coastal resources. We were also happy to see that the plan emphasizes the importance of a science and technology program, and adaptive management. These components are crucial to the success of efforts to restore the coast and we applaud the Corps' recognition of that.

Science and Technology Program

We do not agree with the LCA plan that the Corps should head the Science and Technology office. We are concerned that the Corps would be unable to identify or engage the necessary experts to ensure a successful Science and Technology program. Therefore, we recommend that another agency with more experience in such efforts be given this responsibility. It may also be prudent to consider the White House Office on Science and Technology Policy for this task.

GRN 01: Comment noted. Please see General Response #2 regarding the S&T Program.

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

GRN 01 (Continued)

Furthermore, an employee of the Corps or any other federal agency should not chair the Science and Technology Coordination Board and Science Advisory Boards. Someone outside of the principle planning and implementing agencies would be able to more effectively engage the science and technical community. We understand the need for the Corps and the other agencies to have the authority make decisions and to be responsible for all federal funds, and nothing we are suggesting should be interpreted as abdication of those responsibilities.

Mississippi River Gulf Outlet (MRGO)

GRN 02

Although the Corps does a thorough job of describing the environmental problems associated with the MRGO, the PEIS does not adequately address these problems. In Table 2-21 of the PEIS, under "Water Resources," Restoration Opportunity (RO) 2 is said to affect "possibly some decrease in salinity in the MRGO area." Salinity is a huge problem for the wetlands lining the MRGO, and also has impacts on Lake Pontchartrain. Therefore, MRGO restoration efforts should be designed to more than "possibly" decrease salinity; it should be a large portion of the design of the project.

GRN 03

We acknowledge that shoreline stabilization along the north bank of the MRGO is a critical need, but we do not agree with it being called an "environmental restoration feature." It is an emergency measure that, in the absence of activities to address the root cause of marsh loss attributable to the MRGO, will not achieve any long-term restoration. Given the greater than $107 million dollar price tag of this effort, the Corps must simultaneously implement modifications of the MRGO necessary to restore marsh and address salinity issues to ensure that this money is not wasted. If it is necessary to close the MRGO to deep draft navigation in order to protect Lake Pontchartrain and the wetlands and people in the basin, then that is what should be done. The Corps must not allow the current shoreline stabilization proposal to be a substitute for definitive steps toward closing that channel as called for in the Coast 2050 plan and by the Louisiana Legislature, St. Bernard Parish, and the vast majority of the general public.

Water Quality Concerns

GRN 04

Within the PEIS in Tables 2-21 and 4-1 under Water Quality, the Corps states that the sediments introduced to the receiving basins "would add some constituents, but would likely not exceed alert levels or harm the environment" for both RO1 and RO2. However, the Tentatively Selected Plan (TSP) indicates that it would have a "synergistic result over and above the additive combination impacts and benefits of RO1 and RO2." Given the uncertainty associated with the potential water quality impacts under each of the restoration opportunities and the fact that the impacts under the TSP would be over and above the additive effects of RO1 and RO2, it is entirely possible that the activities in the TSP could result in an exceedance of alert levels and/or harm to the environment. Our concerns are further justified because in reaching this conclusion the Corps apparently relied solely on the best professional judgment of the USGS (page 4-80), and does not seem to have done specific research to support these declarations. Therefore, the Corps must investigate this issue in more depth to ensure that water quality is not adversely impacted by restoration activities so that harm does not befall the environment or the public.

GRN 02: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

GRN 03: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

GRN 04: Table and text have been rephrased to clarify the Cumulative Impacts column with respect to the LCA Plan. In regards to text revisions, the appropriate section(s) have been revised accordingly.

Section 3 presents in a programmatic fashion a summary of the data (available at the time of the drafting of this document) presented by the Louisiana Department of Environmental Quality in the 2002 Water Quality Inventory Section 305(b). DEQ performs collection and analysis for 29 conventional parameters and fecal coliforms through the Surface Water Monitoring Program at numerous locations throughout Louisiana with a priority pollutant scan quarterly at the Mississippi River Sites. For a programmatic level of project planning, the data presented in Section 3 is sufficient for water quality evaluation. Assessment of potential impacts to water quality from individual restoration features, baseline and operational monitoring requirements, and mitigation measures for water quality impacts will be determined during project-specific NEPA analysis and E&D efforts. Permitting and certification requirements of the Clean Water Act will also be complied with for each project. Synergistic and complex interactions of projects would be evaluated under the requirements for evaluation of cumulative impacts under NEPA. With respect to a water quality monitoring program, refer to Section 1 of Appendix A and Section 4 of the Main Report for a discussion of the proposed monitoring program to be developed. Additionally, please see General Response #12 regarding hazardous substances in beneficial use materials.

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

GRN 04 (Continued)

Some work has been done to monitor water quality changes from existing projects. For example, on page 3-43 of the PEIS, the Corps states that Lane et al. (1999) determined that "there was no significant impact of the diversion … for NO2 + NO3" in their study of Caernarvon Freshwater Diversion Project. However, the PEIS fails to indicate whether other water quality parameters, apart from nutrients, were examined and what the results were. It's important to determine if projects will adversely impact *any* water quality parameter, not solely nutrients. Therefore, we request that the Corps modify the PEIS to include this information if available, and include specific language to ensure that all projects will test water quality prior to construction in both the source and receiving body of waters, and monitor all water quality parameters during and after completion of the project.

Sediment Contamination

GRN 05

Given the industrial history of many of the areas that the Corps is seeking to restore and/or from which it seeks to obtain material for restoration, sediment contamination is a real concern that must be adequately addressed in the MR and PEIS. In our scoping comments, we submitted a list of environmental stakeholder issues, supported by 10 other organizations. Issue number 6 dealt with sediment and water quality:

> Sediment and water used for LCA projects shall meet state and federal standards. These must also include the National Oceanic & Atmospheric Administration (NOAA) sediment standards for benthic organisms to safeguard public health and the environment. Appropriate testing and monitoring of water and sediment quality must be completed prior to construction or implementation of the project.

Although the specifics of the testing regime for each project cannot be addressed in a Programmatic EIS, a commitment to test dredged sediments before using them beneficially must be included in the MR and PEIS. The absence of language demonstrating this commitment is especially disconcerting given the extent to which the Corps discusses the Beneficial Use of Dredge Material Program and its quest for $100 million in programmatic authority for program expansion. Additionally, the PEIS in Table 3-6 indicates that there is potential sediment contamination in subprovinces 1,2, and 4. Although Table 3-6 mentions that bed sediments should be sampled before LCA utilization for Subprovince 1 and that the potential for resuspension of toxics should be taken into consideration in Subprovince 2, there is no testing recommended for Subprovince 4. Furthermore, the mere inclusion of these comments within a table is not sufficient to address the issue of sediment contamination. Given the potential for contaminated sediments throughout coastal Louisiana and the implications that resuspension and spreading of these contaminants has on the health of the public and water quality, the PEIS and MR should be modified as described below.

In the absence of Corps or EPA standards for determining harmful levels of sediment contamination, the Corps should use NOAA acute effects standards (the ER-L and ER-M) as a screening tool. These standards can be used to determine whether the sediment toxicity could cause adverse environmental affects to benthic organisms. If chemical analyses of sediments for Contaminants of Concern (COCs) show that the ER-M for a chemical is met or exceeded, then

GRN 05: The Clean Water Act 404 (b)(1) Guidelines (40 CFR 230) are the environmental criteria for evaluating the proposed discharges of dredged or fill material into waters of the United States. Compliance with these guidelines is the controlling factor used by the USACE to determine the environmental acceptability of disposal alternatives. The USACE must demonstrate through completion of a 404 (b)(1) evaluation that any proposed discharge of dredged material is in compliance with the Guidelines. In the 1999 report, "Sediment Quality Guidelines developed for the National Status and Trends Program" (available on NOAA's website http://response.restoration.noaa.gov/cpr/sediment/SPQ.pdf), NOAA states that the sediment quality guidelines ("acute effects standards" referred to in the comment), "were not promulgated as regulatory criteria or standards. They were not intended as cleanup or remediation targets, nor as discharge attainment targets. Nor were they intended as pass-fail criteria for dredged material disposal decisions or any other regulatory purpose". Additionally, in the "Screening Quick Reference Tables" developed by NOAA which present screening concentrations for inorganic and organic contaminants in various environmental media (i.e. ER-L, ER-M, etc.) it is stated that, "these tables are intended for preliminary screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels". Section 4 of the PEIS contains language referencing the *Evaluation of dredged material proposed for discharge in waters of the U.S. – Testing Manual* (EPA/USACE, 1998) (i.e. the Inland Testing Manual) testing protocols and the USACE's intention to employ these and/or similar guidelines for evaluating the proposed discharges of dredged or fill material into waters of the US. Additional language will be incorporated into Section 4.14 of the PEIS to further explain the USACE processes for the above. Therefore, the USACE will continue to comply with Clean Water Act 404 (b)(1) Guidelines. In regards to providing project specific information, please see response to GRN 04.

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

GRN 05 (Continued)

other bioassay tests should to be performed (following the Inland Testing Manual (ITM) protocols) before the sediments are used for restoration projects.

GRN 06

The Corps should also either clarify or remove language from the PEIS in Section 3.22 stating that any dredged material and sediments beneath navigable waters proposed for dredging are not included under Initial Site Assessment (ISA). Chapter 7 of the ITM was cited as a source for the Corps' position that Hazardous, Toxic, and Radioactive Waste (HTRW) does not include this dredged material, however we were unable to find any guidance on this subject in chapter 7 of the ITM. This language must be clarified because it conveys the message that contaminated sediments beneath navigable waters are excluded from regulation.

GRN 07

Additionally Section 3.22.2 of the PEIS states, "due to the large number of sites of concern within the LCA area, compilation of a list of sites of concern for the entire LCA study area is not practicable." The reason for this exclusion should be more fully explained (i.e. lack of funding, simple choice, etc.). The importance of properly testing for and dealing with contaminated sediments is supported by the Corps' own reports that there have been "incidents involving oil and chemical spills, abandoned sites, landfills and leaking underground storage tanks." Many of these known occurrences have resulted in contaminated sediments on land and in the water. Ignoring contaminated sediments in these areas could result in them being spread over a wide area during individual LCA project construction.

GRN 08

The memorandum entitled *Use of Sediment Quality Guidelines (SQGs) in Dredged Material Management Decision Making*[1], states, "As mandated under the Section 404 of the Clean Water Act (CWA) and Section 102 of the Marine Protection Research and Sanctuaries Act (MPRSA), the Corps is required to employ an effects-based testing protocol when dredged material is proposed for open water placement, or those instances when placement is an upland environment resulting in effluent discharge through a weir back into waters of the United States." It is clear that screening of sediments to be dredged should be standard operating procedure; especially for an endeavor as extensive as the LCA plan. Therefore, the Corps should include a section on contaminated sediments in the PEIS indicating what procedures will be employed to ensure that dredging and sediment dispersal during LCA approved projects will not further contaminate the environment.

GRN 09

Furthermore, the PEIS and MR should include a budget for conducting sediment testing within the request for programmatic authority under the Beneficial Use of Dredge Material Program.

Consistency Provisions

GRN 10

In order for restoration to be successful, the Corps must work to ensure that its regulatory and public works programs are consistent with the goals of the LCA plan. Although the Corps attempts to demonstrate its commitment to pursuing consistency by including the provisions in Section 6.2 of the PEIS, these provisions are far too weak to address the glaring inconsistencies

[1] U.S. Army Corps of Engineers. 1998. Memorandum for Commanders, Major Subordinate Commands. Subject: Use of Sediment Quality Guidelines (SQGs) in Dredged Material Management Decision Making. Signed by Major General Russell L. Furman, Director of Civil Works, Dept. of the Army, Washington, DC. Oct. 28, 1998.

GRN 06: If dredged material and sediments beneath navigable waters are within the boundaries of a site designated by the USEPA or the state for a response action under CERCLA, or if they are part of a National Priority List site under CERCLA, they will qualify as HTRW and would be treated accordingly. However, dredged material and sediments beneath navigable waters that do not qualify as HTRW, as defined in the preceding, would be evaluated for suitability for placement in waters of the U.S. in accordance with the Section 404 (b)(1) guidelines as mandated by Section 404 of the CWA, or the criteria established in Section 103 of the Marine Protection, Research, and Sanctuaries Act.

Compilation of a list of sites of concern for the entire LCA Study area is not practicable at this time in light of the large number of sites, funding limitations, and current time constraints. As restoration alternative plans become more defined, detailed HTRW analyses will be performed to evaluate and eliminate, where possible, potential HTRW problem sites from consideration.

GRN 07: The discussion of the regulatory status of sediment contamination refers to the basis for management of hazardous materials and hazardous wastes under the regulations that implement the Resource Conservation and Recovery Act and the Comprehensive Environmental Response Compensation and Liability Act. Prior to using land for restoration purposes, USACE would perform an HTRW assessment to determine if there was a reason to believe that releases of hazardous material regulated under RCRA or CERCLA are present. If hazardous substances or hazardous waste releases are suspected at a project site, additional testing would be performed to detect and determine the nature and extent of contamination by regulated materials, including testing of sediment where contamination is suspected based on site and contaminant characteristics. Situations where sediment quality would not be addressed as part of the HTRW program include sediment contamination that is associated with: historical water quality trends; NPDES permitted discharges; or atmospheric deposition of hazardous constituents such as mercury. Sediment quality issues that cannot be attributed to a RCRA or CERCLA regulated release would be assessed as part of the project-specific NEPA requirements. The project would also have to comply with Clean Water Act requirements regarding contamination and water quality impacts, as described in the response to GRN-05

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

GRN 08: Identification, characterization and management of contaminated sediments would be performed as part of the project-specific environmental, design and engineering analyses completed for each restoration feature. The appropriate section(s) have been revised accordingly. Also see response to GRN 05.

GRN 09: Currently, only the programmatic funding level has been identified for the proposed LCA Plan beneficial use of dredged material. Specific funding requirements for decision documents, environmental impact analyses, environmental compliance, testing and monitoring will be identified in the individual placement-specific plans and budgets.

GRN 10: While an assessment of the effectiveness and applicability of permitting and mitigation programs administered by the USACE may be relevant to the objectives of this study, the recommendation of modifications to a nationally administered and statutorily established program are beyond the scope of a regionally specific report document. Individual projects implemented under the LCA Program will be required to comply with applicable environmental compliance and permitting programs. In addition, the approval of the proposed LCA Plan would provide a basis for environmental consistency for all subsequent water resources related activities in the study area. This would not, however, in any way supercede land uses that may currently be afforded landowners under existing statues.

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

GRN 10 (Continued)

that currently exist. In particular, Section 6.2.4.1 on Regulatory Programs must be strengthened. First of all, the regulatory program is relying too heavily on mitigation to compensate for permitted wetlands destruction. Although it is important to "further enhance the effectiveness of compensatory mitigation" and "encourage private mitigation banks that support LCA plan objectives," studies by the General Accounting Office[2] and the National Academy of Sciences[3] found that the Corps' mitigation program is seriously flawed and not meeting the national "no net loss" goal. Because of the Corps' failure to successfully mitigate wetland losses, it is essential that the Corps make a stronger commitment to avoid and minimize wetland losses from permitting. This is especially necessary because of the Corps' propensity to approve projects impacting wetlands for non-water dependent uses.

GRN 11

Section 6.2.4.4 of the PEIS states, "In some instances it could also be appropriate to review the extent to which the maintenance and operation of existing projects are consistent with coastal restoration activities, and recommend changes to such projects where necessary and practicable, to ensure consistency with restoration efforts." This is a very vague statement and illustrates a lack of commitment on behalf of the Corps to truly pursue consistency. All existing projects should be reviewed and where negative impacts are found, measures to eliminate or minimize those effects should be required.

GRN 12

Under Section 6.2.4.1.3 of the PEIS, the Corps proposes using the Louisiana Department of Natural Resources Office of Coastal Restoration and Management's existing procedures when considering the effects of restoration projects during the permit review process. This procedure requires that the Coastal Management Division (CMD) consult with the Coastal Restoration Division (CRD) for proposed projects within ¼ of a mile from either an active restoration project or a proposed restoration project. Given the nature of the enormous wetland loss being experienced in Louisiana and the potential for fragmentation of existing wetland areas to eventually jeopardize the success of restoration projects, this distance should be extended. The Regulatory Branch should be in continual contact with those working on restoration issues to ensure that no permitted development will impede restoration of the coast, no matter the linear distance from a specific restoration project.

GRN 13

In an effort to promote consistency between the Regulatory Branch and the coastal restoration projects, the Corps proposes to "continue reviewing permit applications to avoid and minimize potential conflicts with the LCA plan." This statement implies that the Regulatory Branch is currently doing this. However, this is not the case. The Regulatory Branch has done little to avoid and minimize the destruction of wetlands in the coastal zone. Evidence of this can be found in the recent court decision in the case of *Pontchartrain Levee District v. St. Charles Airline Lands, Inc.* In that case, which involved the construction of a Corps of Engineers hurricane protection levee, the Court of Appeals upheld a takings claim on the basis that the issuance of a permit from the Army Corps of Engineers (99% according to the trial court) and the State was so certain as to make the fact that permits had not been obtained (or even sought) irrelevant to the establishment of the measure of loss. Because of this, protective efforts must be

[2] United States General Accounting Office. 2001. Wetlands Protection: Assessments Needed to Determine Effectiveness of In-Lieu-Fee Mitigation. U.S. GAO, Washington, DC. GAO-01-325.
[3] The National Academy of Sciences. 2001. Compensating for Wetland Losses Under the Clean Water Act. National Academy Press, Washington, DC.

GRN 11: The existing maintenance and operation projects administered by the USACE are required to fulfill the authorizations provided by Congress under the Rivers and Harbors Act and other authorities. Where impacts of these projects can be mitigated or avoided, this will be undertaken, as is technically feasible and required by environmental laws. However, the USACE does not have the discretion to change authorized projects to the extent necessary to eliminate all impacts from its other projects.

GRN 12: Comment noted. Efforts to coordinate and cooperate between ongoing restoration efforts and permitting of other activities that may impact restoration processes or restored areas will be reviewed on an ongoing basis by the restoration program, permitting and compliance, and state agency staff.

The LDNR Office of Coastal Restoration and Management's existing procedures, as described in Section 6 of the FPEIS, will be used to identify potential regulatory and restoration conflicts. This procedure may be reviewed by the Science and Technology Team and/or the Program Execution Team and revised if determined necessary.

GRN 13: Comment noted. As noted in the discussion of proposed estates in Section 4 of the Main Report, some estates will prohibit surface use whereas other estates will restrict surface use. The consistency determination will be made by the appropriate representative for the United States and/or the State of Louisiana to ensure that the integrity of the project is not compromised. At present, Federal law requires the USACE to accept and process application for the dredging and fill of wetlands. In addition, when Clean Water Act 404 permits are issued, they require at a minimum one-for-one mitigation for any wetlands impacted.

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

GRN013 (Continued)

employed in conjunction with restoration. The LCA plan must include a protective mechanism that prevents restored areas from subsequently being developed through the issuance of a Section 404 permit or other permit. The LCA plan must also include a mechanism for protecting existing wetland areas. Without such efforts, we will be wasting taxpayers' money and dooming our well-intentioned efforts to protect the public from hurricane damage and flooding, preserve the culture of coastal Louisiana, and ensure the sustainability and integrity of our coastal ecosystems.

GRN 14

The LCA should also incorporate an expectation that landowners whose lands are positively affected will provide a quid pro quo (prior to expenditure of federal dollars) to either give or sell at a reduced price, conservation easements on the affected property or otherwise. It is also important to provide protection for restored areas that would not be subject to the Corps' 404 permitting authority, such as coastal forests that could be logged under the silviculture exemption. Mechanisms such as conservation easements or land trusts should be included in the LCA plan with any necessary adjustments being made to the budget to reflect this priority.

GRN 15

The LCA budget should also be revised to include money for the Regulatory Branch to specifically fund enforcement efforts and inspectors to monitor permitted projects, as well as look for Section 404 violators. Without sufficient staff and funds to monitor and enforce permitting actions, there is great potential for adverse impacts to coastal restoration projects and coastal wetlands in general. The budget should also be amended to include funds for a computer database that would allow the Corps to examine cumulative impacts of wetland loss in and out of the coastal zone.

Scope of Study Area

GRN 16

According to the MR, the study area for this plan is defined by the legal boundaries of the coastal zone. This is an unacceptably small study area because it excludes much of the Atchafalaya River. At the very least, the study area should include both the Atchafalaya and the entire Pontchartrain Basin. These areas are intimately connected to Louisiana's coastal zone and to exclude them will adversely impact the success of restoration efforts. Each of these basins must be considered during any LCA planning and management for water quantity and water quality.

Funding for the Federal Task Force

GRN 17

In the Executive Summary of the MR, the Corps states, "Collaboration amongst other Federal agencies and the program is ensured through the involvement of a Federal Task Force comprised of members equivalent in authority and responsibility to the Secretary of the Army." A Federal Task Force is very important to successful management of the implementation of the LCA plan. However, the formation of this task force is not sufficient to ensure full collaboration. The Federal Task Force should be funded under the LCA plan so that participation is complete and continuous, and monies are not diverted from other important agency work. Therefore, monies should be included in the LCA budget to accommodate Federal Task Force activities.

GRN 14: USACE has the constitutional and statutory obligation to ensure that landowners are offered just compensation for real estate interests. The landowners may opt to donate these interests to the project, but they must be apprised of the just compensation to which they are entitled. The real estate interests proposed for the project, e.g., fee, in appropriate areas, and a perpetual wetland creation and restoration easement, which expressly prohibits new habitable structures and restricts mineral exploration and development are discussed in Chapter 4 of the Main Report. The types of realty actions needed to implement and protect restoration projects are described in Section 4 of the Main Report. These mechanisms address land use, rights and occupation of surface for restoration efforts and protection of restored lands.

GRN 15: USACE is currently developing an Enterprise GIS which will assist regulatory in its evaluation of all project impacts, especially cumulative impacts. Funding for the Regulatory Branch is outside of the scope of the LCA Program. Funding for the monitoring and enforcement programs are dependent on the authorization of the USACE budget by Congress, and by allocation of resources under these appropriations made by the Secretary of the Army.

GRN 16: Please see General Response #3 regarding the LCA Study Area.

GRN 17: Funding provided to other agencies is dependent on authorizations and approved budgets of those agencies. Provision of funding to other agencies for their task force participation will be dependent on Congressional approval of authorizations for each agency budget.

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

Typographical and Other Errors

In reviewing the MR and PEIS we have found numerous typographical and other errors. These include:

The fish consumption advisories in Section 3.15 of the PEIS should be updated to reflect new additions and overlooked segments. In particular, the following fish consumption advisories for mercury seem to be missing: the Amite River Drainage Basin, the Bogue Falaya and Tchefuncte Rivers, Gulf of Mexico waters, the Seventh Ward Canal in Vermilion Parish, and the Tangipahoa River.

In Table 4-1 of the PEIS, under "Barrier Systems" the TSP indicates that it would have a synergistic result over and above the additive combination impacts and benefits of RO1 and RO2. We question how this can be when RO1 for this category says there are no cumulative impacts.

In the PEIS, AAHU is not defined until page 564 of the document in Appendix A1 after being used repeatedly throughout the PEIS. It also does not appear in the list of Abbreviations and Acronyms. Wetland Value Assessment (WVA) should also be added to this list.

The following sentence, on page 2-102 of the PEIS, should be modified to avoid redundancy: "By the year 2050, this National Estuary is predicted to have lost 265,000 acres in the next 50 years."

In Table 2-21of the PEIS, "Essentiel Fish Habitat" should read "Essential Fish Habitat." Furthermore, under "Pipelines" in this table, the statement for RO1 is missing the word 'of' after the word 'protection' and under "Agriculture" in the RO1 column, 'he' should be 'the.' The header for Appendix B1 of the PEIS has the word 'Biological' spelled as 'Biologicla.'

The page numbers in the PEIS' Table of Contents are a little bit off in some cases. For example, Sections 1.9.6 and 1.9.7 are said to be on page 1-47, but they are actually on pages 1-45 and 1-46 respectively. Another example is Figure 3-17 that is said to be on page 3-64, but it is actually on 3-65.

On page S-19 of the PEIS, the final paragraph has a monetary amount listed with 2 dollar signs instead of a space and a single dollar sign ($$1,961,380,000). On page 2-95 of the PEIS, there is a crossed out letter a in the first paragraph before the word die-off.

The header on the first page of Appendix B5 in the PEIS should be corrected because it is the header from Appendix B4. Also, if possible, Appendix A2 should be reformatted so that the carryover line is indented, not the principle listing. This would make it much easier to scan through the names more quickly.

GRN 18

GRN 18: The Fish Consumption Advisories will be updated appropriately for water bodies within the proposed study areas in the PEIS. This includes from the list in the comment the Amite River Drainage Basin and the Gulf of Mexico waters. The other water bodies referred to, i.e. the Bogue Falaya and Tchefuncte Rivers, the Seventh Ward Canal, and the Tangipahoa River, are not within the proposed study areas and will not be included in the updates. The appropriate sections have been revised accordingly and the appendix has been reformatted as suggested.

Letter 21: Ms. Vicki E. Murillo and Ms. Cynthia Sarthou, Gulf Restoration Network (GRN)

GRN 19

Public Participation

In order for this ambitious plan to succeed, it must be both understood and supported by the public because the very survival of their homes, communities, and heritage are at stake. Unfortunately, public engagement so far has been insufficient. We strongly urge that all future work on the LCA—near term and otherwise—begin with the public and include all relevant sectors of the public throughout. Please contact us if you would like help on this effort.

We respectfully submit these comments and look forward to being a part of the valuable process of developing and implementing a comprehensive plan to restore coastal Louisiana. Please notify us of your response to these comments and let us know when the final MR and PEIS become available.

Sincerely,

Vicki E. Murillo
Program Director for Water Resources

Cynthia Sarthou
Executive Director

GRN 19: Section 5 of the Main Report describes future public involvement. As the LCA Plan transitions from plan formulation to plan implementation, there would also be opportunities for public participation and input. For each of the LCA Plan projects, the requisite decision documents, NEPA documents, and accompanying public participation process would be completed. During this time, the public would have the opportunity to comment on the scope of issues, resources, impacts, and alternatives to be addressed in the FPEIS. During periods when official public or scoping meetings are not being held, the USACE, in coordination with the state of Louisiana, would keep the lines of communication open through web site interaction, speaking engagements, workshops, news releases, timelines, frequently asked questions, fact sheets, and talking points. To that end, a Strategic Communications Plan would be established that clearly defines a proactive, consistent, and cohesive procedure for informing the public of the LCA Study process and the development of the LCA Plan.

Letter 22: Mr. Timothy Hebert (TMH)

Sate of Timothy M. Hebert
Attorney at Law
326 South Main Street
Breaux Bridge, Louisiana 70517

COLLECTED

August 23, 2004

SENT VIA FACSIMILE TRANSMISSION TO 504-862-1892 AND VIA E-MAIL TO:
William.P.Klein.Jr.@mvn02.usace.army.mil on 8/23/04

Dr. William P. Klein, Jr.
Environmental Manager
U.S. Army Corps of Engineers-New Orleans District
Post Office Box 60267
New Orleans, Louisiana 70160

RE: Comments on the DRAFT Louisiana Coastal Area Study, Main Report and Ecosystem Restoration Study, July, 2004

Dear Dr. Klein:

The following will serve as my comments regarding the above-referenced LCA:

TMH 01

As a former legal counsel to the Office of Coastal Restoration and Management within the Louisiana Department of Natural Resources in the early 1990's, I am in utter shock and complete disillusionment to learn that the New Orleans District, U. S. Army Corps of Engineers (the Corps will be used to reference the New Orleans District) is the lead agency in the comprehensive restoration plan for Louisiana's coastal ecosystem. This is nothing short of allowing the "fox to guard the hen house". The Corps' environmental fumbles, foibles, and outright disasters throughout the State of Louisiana are well known, well-documented, and serve as ominous reminders that the Corps of Engineers is simply an administrative cadre of engineers whose sole agency mission is to provide engineering and technical support for waterborne navigation and flood control. With respect to restoration of Louisiana's coastal habitats, this organization is way out of its league when compared to such groups as the state's own natural resource agencies and university faculty and staffs as well as groups formed as a result of other restoration efforts such as the Coastal Wetlands, Planning, Protection and Restoration Act.

TMH 02

Two recent Corps environmental blunders make it abundantly clear that the Corps is uniquely unqualified to serve as the lead agency on large-scale ecosystem restoration plans such as the LCA. The first example is the Corps inability and outright reluctance to

TMH 01: Comment noted. The State of Louisiana is the local cost-share sponsor and has been intimately involved with the development of the LCA Plan. Section 3 in the Main Report and Section 2 in the FPEIS provide additional information regarding Federal and state agency involvement in Plan Formulation.

TMH 02: Comment noted.

Letter 22: Mr. Timothy Hebert (TMH)

TMH 02 (Continued)

address the Atchafalaya Basin siltation problem until long after the problem financially ruined many local families who derived their living from the Basin and irreparably damaged thousands of acres of swampland. While the old adage "better late than never" may apply in this instance, the Corps quietly chose to sit on its duff until the public's hue and cry (and that of a few Louisiana politicians) forced their hand to do "something". The Corps unequivocally had the environmental well-being of the Basin in the palm of its hand, was completely in the "know" of the enormity and severity of the environmental problems plaguing the Basin, and did nothing for a long, long time. The familiar excuse of "lack of funds" rang hollow to the Louisiana public yet the Corps never "pounded the table" in Washington on Louisiana's behalf nor did they seek to make correcting this problem a national priority within the agency. Now that some federal funding is imminent to begin addressing this problem, the Corps is suddenly the federal expert in restoring the Basin. Secondly, while the intrinsic value of using dredge spoil material for coastal restoration efforts in Louisiana is essentially a given and is indeed invaluable, the track record of the Corps in maximizing the beneficial use of dredged spoil material for wetland creation and restoration is equally abysmal. Despite having formal administrative mechanisms in place authorizing and encouraging the Corps to beneficially use dredged material from its maintenance dredging program as early as 1986 (and most definitely in 1992), unofficial estimates (the Corps apparently does not make this statistic public) place the Corps' annual use of dredged material from its maintenance dredging for wetland restoration and creation at a mere 25-35 %! This is unacceptable! The state's goal is to beneficially use 100% of this material. The Corps has used a variety of reasons/explanations to justify this poor beneficial use percentage: logistics, channel dynamics, lack of congressional authority and policy, conflicts with protected species, physical and chemical characteristics of dredged material, lack of funding, and conflicts with other uses of the water bottoms. While these are all legitimate issues, the Corps has had over ten years to resolve these issues and develop, implement, and fund a comprehensive beneficial use of dredged material strategy for the State of Louisiana. Instead, the Corps has flat out administratively fibrillated in this regard but now that an increase in federal funding for coastal restoration in Louisiana appears imminent, the Corps suggests $100 million in beneficial use funding as a near-term plan component, but only for the Calcasieu River-and without explanation in the LCA! Why just the Calcasieu River? Why was such a funding request not included in the Corps O & M budget for all of Louisiana five years ago? Or three years ago? What has changed? To even suggest that such a request must be part and parcel of the LCA or some other formal plan before it can be considered or proposed is ludicrous! It simply boggles the mind that a federal agency needs ten years and more to implement and adequately fund the beneficial use of dredged material to create and restore wetlands in Louisiana.

TMH 03

These two environmental blunders by the Corps are reason enough for the State and other federal agencies to take a step back and re-evaluate the Corps role as lead

TMH 03: Comment noted. Please see Section 4 of the Main Report for additional information on the proposed beneficial use program associated with the LCA Plan.

Letter 22: Mr. Timothy Hebert (TMH)

Page Three-August 23, 2004
Dr. William P. Klein, Jr.

agency in the development and implementation of the LCA. Why would state and federal agencies with very clear natural resources and environmental conservation mandates matter-of-factly allow the Corps to be the lead agency for such an enormous and important environmental and ecosystem restoration plan in Louisiana, especially in view of Corps' disastrous environmental record in the State of Louisiana? The State of Louisiana, its universities, and the federal natural resources/environmental agencies employ most of the world's foremost wetland experts. They are not under the employ of the Corps to assist in policy making and restoration priorities in Louisiana. Res Ipsa loquitur. TMH 04

Moreover, why is there a need to create a new entity under the proposed WRDA to take over the functions of the QWPPRA program? The cooperative nature of QWPPRA has served the state and federal agencies well and appears to be working satisfactorily. To this day, QWPPRA remains a viable entity known for putting the interests of Louisiana ahead of any one agency or restoration philosophy. QWPPRA has matured into a very functional and predictable administrative entity. Accordingly, there appears to be no real need, other than purely political motives, to create a new entity under WDRA to implement the LCA. TMH 05

In addition to these specific comments, in reviewing the proposed LCA, it is readily apparent that many of the proposed projects lack enough details for anyone to begin to make meaningful comments on either their potential effectiveness or their desirability. Not only are the projects less than adequately described, the methodology for implementation and the description of the entities and roles they will play in any implementation scheme are far from adequate to comment on much less to use as justification to ask for a billion dollars from Congress! From the description of the process, it is barely possible to tell who is in first and totally beyond imagination as to who might be on second. Accordingly, when the proposed LCA is analyzed in this light and in view of the fact that the public has been given only 45 days in which to provide comment, it is not difficult to imagine why the LCA, as presently proposed, will never be consistent to the maximum extent practicable with the enforceable policies of the federally approved Louisiana Coastal Resources Program. TMH 06

Respectfully submitted,

Timothy M. Hebert
Attorney At Law

TMH 04: Comment noted. The co-located team that has work together to develop the LCA Plan consists of representatives from several Federal and state agencies and academia from Louisiana and across the Nation. Section 5 of the FPEIS identifies agencies that participated in the co-located team.

TMH 05: With average annual funding for CWPPRA at approximately $50 million per year, that program would not be able to undertake the restoration efforts proposed under the LCA Plan. Please see General Response #4 regarding the coordination roles for agencies and local governments in the LCA Study and General Response #6 regarding the relationship of CWPPRA and LCA.

TMH 06: Additional details regarding components of the LCA Plan and restoration features will be provided in follow-up feasibility level analyses and associated NEPA documents.

Letter 23: Dr. William Herke (WHH)

WHH 01

My name is William H. (Bill) Herke and I live at 555 Staring Lane, Baton Rouge, Louisiana. I am an American Fisheries Society Certified Fishery Scientist, and a Fellow of the American Institute of Fishery Research Biologists. I was Assistant Leader of the Louisiana Cooperative Fish and Wildlife Research Unit at Louisiana State University for over 30 years. Most of that time my research was on the use made of the coastal marsh as a nursery for fishes, shrimps, and blue crabs. Concurrently, I studied the effects of water control structures on such nursery use.

Some of you in the audience may remember me. I led the fisheries study on Sabine National Wildlife Refuge in the 1980's to help the U.S. Fish and Wildlife Service design their water control structures to interfere as little as possible with fisheries access. Also in the 1980's, I led the fisheries study for the U.S. Soil Conservation Service (Now the Natural Resources Conservation Service) Cameron-Creole project.

Those of you who know me are probably wondering why the Corps' Scoping Report and their DPEIS say I proposed the use of water and salinity control structures to reduce marsh deterioration as well as provide fish access. I am wondering that too, because I DID NOT SAY THAT. Now I want to read you the letter I sent the Corps this week requesting a retraction.

555 Staring Lane
Baton Rouge, LA 70810
25 July 2004

WHH 01: The summary of Dr. Herke's scoping comments has been revised to better reflect the intent of his scoping comment letter. "The use of water and salinity control structures are controversial and, if not properly designed, could cause marsh loss. If such structures were designed to mimic natural hydrology, they might help reduce marsh deterioration." However, there is a complexity of designing structures so that fish access would be interfered with as little as possible. Dr. Herke believes it is necessary to allow fish access 24 hours a day, 365 days a year at all levels in the water column so that important species are not deprived access. Further, rock weirs need to be designed so that spaces between rocks do not become plugged or these structures would have the same deleterious effects on fisheries as a conventional fixed weir.

Salinity control structures are not part of the near-term LCA Plan. However, fisheries access has been further addressed in the FPEIS.

Letter 23: Dr. William Herke (WHH)

PM-C

555 Staring Lane
Baton Rouge, LA 70810
25 July 2004

Dr. William P. Kline, Jr.
Environmental Manager
U.S. Army Corps of Engineers-New Orleans District
P.O. Box 60267
New Orleans, LA 70160

Dear Dr. Kline:

WHH 01 (Continued)

Both the Scoping Report, Louisiana Coastal Area (LCA) Ecosystem Restoration Study dated June 2004, and the Draft Programmatic Environmental Impact Statement dated July 2004, contain the sentence, "William Herke, Ph.D. 555 Staring Lane, Baton Rouge, Louisiana 70810, proposes the use of water and salinity control structures to reduce marsh deterioration as well as provide fish access." This is a gross misinterpretation of my letter to you dated 3 May 2004 following the scoping meeting held in Lafayette, Louisiana on 23 April 2004.

In that letter, I did not propose the use of water and salinity control structures. Rather, I commented on the structures proposed by the Corps. I pointed out that the use of such structures is controversial and that other scientists have shown that they may actually cause marsh loss if not designed properly. I did say if they are designed to mimic the natural hydrology they might help reduce marsh deterioration. Although I did not say so in that letter, this would be a long term fisheries benefit. But the near term result will be a reduction in fisheries production.

I would never say such structures would "provide fish access." Such structures almost always reduce fish access. I pointed out the complexity of designing structures so that fish access would be interfered with as little as possible. I further pointed out that it would be necessary to allow access 24 hours a day 365 days a year, and at all levels in the water column, if important species were not to be denied access. And I further pointed out that rock weirs would need to be designed so that the spaces between the rocks did not become plugged or they would eventually have the same deleterious effects on fisheries as a conventional fixed crest weir.

Finally, I included with my letter four scientific publications that deal in detail with the design of water control structures and their effects on fishery organisms.

Salinity control structures are a significant feature of the restoration plan advanced for Subprovince 4. If such structures are not designed to allow adequate fisheries ingress and egress they could decimate fisheries production in the subprovince. Attention must be called to this in the final Main Report and Final PEIS. Studies to evaluate structure designs that could furnish adequate fisheries ingress and egress should start now. I consider this matter so important that I

Letter 23: Dr. William Herke (WHH)

WHH 01 (Continued)

am sending a copy of this letter to Colonel Rowan, District Engineer.

In conclusion, I formally request that the misinterpretation of my letter quoted in paragraph one above be replaced in the final Main Report and final PEIS with the full text of my letter to you dated 23 April 2004. (Copy attached.)

Sincerely,

William H. Herke

William H. Herke, Ph.D.
AFS Certified Fishery Scientist, and Fellow,
American Institute of Fishery Research Biologists

copy: Peter J. Rowan
Colonel, U.S. Army
District Engineer

Letter 23: Dr. William Herke (WHH)

555 Staring Lane
Baton Rouge, LA 70810
3 May 2004

William P. Klein, Jr.
CEMVN-PM-RS
P.O. box 60267
New Orleans, LA 70160-0267

Dear Sir:

WHH 01 (Continued)

This letter is in response to the request for comments at the scoping meeting for modification of the LCA Comprehensive Coastwide Ecosystem Restoration Study.

My comments refer to the use of water and salinity control structures. These may be used primarily in Subprovince 4, but my comments would apply wherever such structures are used. The use of such structures is controversial. Scientists at LSU have shown that they may actually cause marsh loss if not designed properly. However, if they can be designed so the natural hydrology is mimicked, then they may actually help reduce marsh deterioration. But they must also be designed with the needs in mind of the fauna using the marsh. Since use of the marsh by fishery organisms is my area of expertise, I will concentrate on that aspect.

The effects of structures can be very complex. I and my associates have shown that the conventional fixed crest weir is very deleterious to fishery organisms. Fishery production in areas controlled by such structures is greatly reduced. We also have demonstrated that putting a 10-cm slot from top to bottom of a conventional weir made the weir much less deleterious to fishery production. In other studies, we have shown that there is a succession of fishery organisms moving into and out of the marsh throughout the entire year. Moreover, some species move more during the day and others move more at night. And some species move mostly near the surface, while others move more in the middle of the water column, and yet other species move primarily on the bottom. Theoretically, a rock weir would allow movement at all levels and times, but I do not think they have been used enough to be sure the openings between the rocks would not become plugged after a while. If so, they would function more as a conventional weir.

If control structures are to be used they must allow for adequate fishery organism movement day and night, 365 days a year. There is no proven best design to do this. For instance, a 10-cm slot is no silver bullet. The slot should probably be as wide as possible without compromising the water or salinity control for which the structure is installed.

I am enclosing four publications that deal in detail with the design of water control structures and

Letter 23: Dr. William Herke (WHH)

WHH 01 (Continued)

their effects on fishery organisms. I urge you to give them exhaustive study. If you have questions, please contact me.

Sincerely,

William H. Herke

William H. Herke, Ph.D.
AFS Certified Fishery Scientist, and
Fellow, American Institute of Fishery Research Biologists

enclosures:

Rogers, B. D. and W. H. Herke. 1985. Estuarine-dependent fish and crustacean movements and weir management. Proceedings of the fourth coastal marsh and estuary management symposium. pp201-219. School of Forestry, Wildlife, and Fisheries, Louisiana State University and Agriculture Center, Baton Rouge.

Herke, W. H., E. E. Knudsen, P. A. Knudsen, and B. D. Rogers. 1992. Effects of semi-impoundment of Louisiana marsh on fish and crustacean nursery use and export. *North American Journal of Fisheries Management* 12:151-160.

Rogers, B. D., W. H. Herke, and E. E. Knudsen. 1992. Effects of three different water-control structures on the movements and standing stocks of coastal fishes and macrocrustaceans. *Wetlands* 12(2):106-120.

Rogers, D. R., B. D. Rogers, and W. H. Herke. 1994. Structural marsh management effects on coastal fishes and crustaceans. *Environmental Management* 18(3)351-369. Springer-Verlag, New York.

Letter 24: Mr. Harold Herrmann – Main Report (HMH-MR)

101 Blackburn Place
Covington, Louisiana 70433

August 21, 2004

Mr. Tim Axtman
CEMVN-PM-C
Post Office Box 60267
New Orleans, Louisiana
70160-0267

Dear Mr. Axtman,

HMH-MR 01 I am writing to request an extension of time for the comment period related to the Louisiana Coastal Area Draft Programmatic Study Report – Ecosystem Restoration Plan as well as request that a public hearing be held in Belle Chasse, Louisiana where scoping meetings were held (with considerable public interest) in the past.

When we spoke at one of the meetings, this Louisiana Coastal Area Plan did not seem to be in existence. Numerous people in attendance inquired and the response was "… we don't have that information yet". Now, many of those same people who participated at that time, do not even know about this proposed project. The meetings held in July were inconvenient to many of the people directly involved as the notification period was very short and many individuals were on vacation at that time of the year. HMH-MR 02

HMH-MR 03 Mr. Kerry St. Pe', the Director of the Barataria-Terrebonne National Estuary Program and Interim Administrator of the Louisiana Universities Marine Consortium addressed some of his concerns at one of the meetings held in July. He as provided specific comments regarding the draft LCA restoration plan human component and scientific environmental analysis that does not agree with your criteria application strategy in his letter to you dated August 3, 2004.

Looking back over my notes from the past scoping meetings, those meetings appear to have been rendered meaningless and a waste of time by the current document, which specifically lacks a human component. Specifically,

i) The "one size fits all approach" in the document does not address the needs nor examine the individual communities within its scope, i.e. Myrtle Grove Marina Estates and the town of Ironton that exist side by side as well as the needs of the parish of St. Bernard. HMH-MR 04

HMH-MR 05 ii) With respect to the proposed Myrtle Grove "medium" diversion – what are you comparing the proposed size to? Isn't the proposed diversion going to be the largest diversion ever constructed? To build ridges, wouldn't the volume of water flow have to be so large that the result would be a totally unacceptable salinity level of the water to both human and wildlife habitat?

These issues, as well as others, need to be addressed and met upon within each community that will be impacted in the future as well as those that have been impacted in the past. The "one size fits all" approach is simply unacceptable. HMH-MR 06

HMH-MR 07 Please provide a written response to my questions and request.

Sincerely,

Harold M. Herrmann, Jr.

HMH-MR 01: Prior to publication of the DPEIS, 6 scoping meetings regarding the comprehensive plan were held throughout the state in April and May 2002. An additional set of 5 scoping meetings regarding the near-term plan were held throughout the state in April 2004. Section 5 "Public Involvement and Coordination" of the FPEIS describes the extensive public meetings conducted. Notifications of the availability of the DPEIS were published in the *Federal Register* and a 45-day comment period was provided. The Notice of Availability was mailed to over 3,000 interested parties, including libraries, Federal, state, and local agencies, radio, television, and newsprint media. Nine public meetings covering 3 states were conducted having previously been announced in local newspapers, radio and television in multiple states. Considering such efforts to notify interested parties, an extension of the comment period was not granted. To maximize accessibility to public meetings, sites have been rotated throughout coastal Louisiana. This practice will continue.

The NEPA regulations do not require additional public meetings to be held following release of the Final PEIS. Therefore, there will not be another public meeting for the LCA Plan. However, there will be another comment period, during which comments regarding the Final Main Report and PEIS may be submitted. Additionally, as part of the implementation process for each restoration feature, public meetings will be held in accordance with NEPA and other permitting regulations to obtain public input on the scope of issues, resources, impacts, and alternatives to be addressed for that particular restoration feature.

HMH-MR 02: During scoping meetings the LCA Plan had not yet been selected and could not, therefore, be discussed. In regards to the July public meeting being inconvenient, announcements for the public meetings were posted in accordance with NEPA regulations.

Letter 24: Mr. Harold Herrmann – Main Report (HMH-MR)

HMH-MR 03: The planning objectives for the LCA Plan clearly identify the need to provide continued diversity, both environmental and economic related, as a product of successful restoration of the coastal ecosystem. While this applies more directly to the ecologic components of the system it applies indirectly to the human environment as well. Protection of vital socio-economic resources is one of the critical needs elements addressed by the near-term LCA Plan (Critical Needs Criterion #4) used to select LCA Plan components. The proposed restoration features in the LCA Plan address the need to support and protect such resources as cultures, communities, infrastructure, business and industry. Tradeoffs in system use will be necessary to accomplish effective coastal restoration and these will include human impacts. The implementation of the LCA Plan will seek to avoid or minimize these to the maximum extent possible. Please refer to the LCA Plan for a detailed discussion of how the critical needs criteria were applied to select LCA Plan components.

Responses to comments submitted by Mr. St. Pé can be found in Comment Code BTNEP.

All comments received during the scoping process were taken into consideration during the preparation of the DPEIS and Main Report. Those comments can be reviewed in Section 5.0 of the FPEIS.

HMH-MR 04: Pursuant to 40 CFR Part 1502.28 and as described the "National Environmental Policy Act (NEPA) Requirements" section of the FPEIS, this present statement will serve as a programmatic analysis for restoration efforts that will concentrate on coast-wide province-wide and basin-wide issues. Tiering, as discussed in Part 1502.28 of the NEPA, refers to coverage of general matters in broader environmental impact statements with subsequent narrower statements or environmental analysis incorporating by reference the general programmatic statements and concentrating solely on the issues specific to the statement subsequently prepared.

Letter 24: Mr. Harold Herrmann – Main Report (HMH-MR)

HMH-MR 04 (Continued): Because this is a Programmatic EIS, it is considered a "tiered" document. Feasibility-level detailed decision documents will be developed on a project-by-project basis for each of the near-term critical restoration features. On a project-by-project basis, the required NEPA process will be conducted to present selected alternatives and garner public comment.

HMH-MR 05: In the LCA Plan, diversions werereferred to as either small (1,000 – 5,000 cfs diversion), medium (5,000 – 15,000 cfs diversion), and large (greater than 15,000 cfs). The medium diversion with dedicated dredging at Myrtle Grove is described in Section 2 of the FPEIS as a 2,500 to 15,000 cfs, thus qualifying it as a "medium" diversion. Specific details the benefits and impacts of the proposed restoration feature will be determined during project implementation.

Letter 24: Mr. Harold Herrmann – Main Report (HMH-MR)

HMH-MR 06: As the LCA Plan transitions from plan formulation to plan implementation, there would be opportunities for public participation and input. For each of the LCA Plan projects, the requisite decision documents, NEPA documents, and accompanying public participation process would be completed. During this time, the public would have the opportunity to comment on the scope of issues, resources, impacts, and alternatives to be addressed in the DPEIS. During periods when official public or scoping meetings are not being held, the USACE, in coordination with the state of Louisiana, would keep the lines of communication open through web site interaction, speaking engagements, workshops, news releases, timelines, frequently asked questions, fact sheets, and talking points. To that end, a Public Involvement Plan would be established that clearly defines a proactive, consistent, and cohesive procedure for informing the public of the LCA Plan process and the development of the LCA Plan. Furthermore, cumulative impacts (part 1508.7 of the NEPA) of the proposed action, which take into account potential impacts from past, present, and reasonably foreseeable future actions, will be described.

HMH-MR 07: Responses to all public comments on the DPEIS and LCA Plan are provided in this response summary.

Letter 25: Mr. Harold Herrmann – EIS (HMH-EIS)

101 Blackburn Place
Covington, Louisiana 70433

August 21, 2004

Dr. William P. Klein, Jr.
CEMVN-PM-RS
Post Office Box 60267
New Orleans, Louisiana
70160-0267

Dear Dr. Klein,

HMH-EIS 01 I am writing to request an extension of time for the comment period related to the Draft Programmatic Environmental Impact Statement that has been presented for multiple projects across the State of Louisiana as numerous individuals are unaware of the "one size fits all" approach.

I also request that public hearings be held in Belle Chasse, Louisiana where previous scoping meetings were held (with considerable public interest) in the past. The meetings held in July were inconvenient to many of the people directly involved as the notification period was very short and many individuals were on vacation at that time of the year. HMH-EIS 02

The Draft Programmatic Environmental Impact Statement is voluminous and applies to multiple projects with a "one size fits all" approach that fails to consider the effects on and needs of individual areas. Combining all of these issues into one EIS fundamentally negates true public input in attempts to solve one particular area's problems.

HMH-EIS 03 Mr. Kerry St. Pe', the Director of the Barataria-Terrebonne National Estuary Program and Interim Administrator of the Louisiana Universities Marine Consortium addressed some of his concerns at one of the meetings held in July. He as provided specific comments regarding the draft LCA restoration plan human component and scientific environmental analysis that does not agree with your criteria application strategy in his letter to you dated August 3, 2004.

Looking back over my notes from the past scoping meetings, those meetings appear to have been rendered meaningless and a waste of time by the current document, which specifically lacks a human component. Specifically,

i) The "one size fits all approach" in the document does not address the needs nor examine the individual communities within its scope, i.e. Myrtle Grove Marina Estates and the town of Ironton that exist side by side as well as the needs of the parish of St. Bernard. HMH-EIS 04

ii) With respect to the proposed Myrtle Grove "medium" diversion – what are you comparing the proposed size to? Isn't the proposed diversion going to be the largest diversion ever constructed? To compare the proposed diversion to the Davis Pond Diversion, a diversion that is still not functioning properly, is a trial and error approach that may not succeed and to further commingle that proposal with the multiple other proposals (i.e. MRGO) should not be included in one single Environmental Impact Statement. HMH-EIS 05

These issues, as well as others, need to be addressed and met upon within each community that will be impacted in the future as well as those that have been impacted in the past. The "one size fits all" approach is simply unacceptable. HMH-EIS 06

HMH-EIS 07 Please provide a written response to my questions and request.

Sincerely,

Harold M. Herrmann, Jr.

HMH-EIS 01: Please see response to HMH-MR 01.

HMH-EIS 02: Please see responses to HMH-MR 01, HMH-MR 04, and HMH-MR 06.

HMH-EIS 03: Please see response to HMH-MR 03.

HMH-EIS 04: Please see response to HMH-MR 04.

HMH-EIS 05: Please see responses to HMH-MR 04 and HMH-MR 05.

HMH-EIS 06: Please see response to HMH-MR 06.

HMH-EIS 07: Please see response to HMH-MR 07.

Letter 26: Mr. Ralph L. Herrmann – EIS (RLH-EIS)

August 22, 2004

Dr. William P. Klein, Jr.
CEMVN-PM-RS
P. O. Box 60267
New Orleans, LA 70160-0267

Dear Sir:

RLH-EIS 01 This is a request for a time extension to the comment period regarding the Draft Programmatic Environmental Impact Statement that has been presented for multiple projects across the state of Louisiana as numerous people are unaware of its existence and "one size fits all" content. Also, I am requesting that a public hearing be held on the west bank, in Belle Chasse where scoping meetings were held in the past with considerable public interest. The meetings held in July were inconvenient to many of the people directly involved and not enough notification to plan to attend as people vacation at that time of year. RLH-EIS 02

RLH-EIS 03

1. The Draft Programmatic Environmental Impact Statement is voluminous and applies to multiple projects, a "one size fits all" mindset that fails to consider specific affects and needs of individual areas. Combining all of these issues into one EIS fundamentally negates true public input in attempts to solve one particular area's problems. Mr. Kerry St. Pe', the Director of the Barataria-Terrebonne National Estuary Program and Interim Administrator of the Louisiana Universities Marine Consortium addressed some of this at one of the meetings held in July and has provided specific comment regarding the human component and scientific environmental analysis in his letter to you dated August 3, 2004. Looking back over my notes from the scoping meetings regarding the EIS, those meetings have been rendered meaningless and a waste of time by this document that is specifically lacking the human component.

2. This "one size fits all" document does not address the needs nor take a good look at individual communities within its scope i.e. Myrtle Grove Marina Estates and Ironton (an elderly minority community) existing side by side and the entire St. Bernard Parish. RLH-EIS 04

RLH-EIS 01: Prior to publication of the DPEIS, 6 scoping meetings regarding the comprehensive plan were held throughout the state in April and May 2002. An additional set of 5 scoping meetings regarding the near-term plan was held throughout the state in April 2004. Section 5 "Public Involvement and Coordination" of the DPEIS describes the extensive public meetings conducted. Notifications of the availability of the DPEIS were published in the *Federal Register* and a 45-day comment period was provided. The Notice of Availability was mailed to over 3,000 interested parties, including libraries, Federal, state, and local agencies, radio, television, and newsprint media. The meetings were announced in local newspapers, radio and television in multiple states. Considering such efforts to notify interested parties, an extension of the comment period was not granted. To maximize accessibility to public meetings, sites have been rotated throughout coastal Louisiana. This practice will continue. Also, The NEPA regulations do not require additional public meetings to be held following release of the Final PEIS. Therefore, there will not be another public meeting for the LCA Plan. However, there will be another comment period, during which comments regarding the Final Main Report and PEIS may be submitted.

RLH-EIS 02: Public meetings were held throughout the Louisiana Coastal Area and in three other states (TX, MS, TN). Announcements for the public meetings were posted in accordance with NEPA regulations.

RLH-EIS 03: The planning objectives for the LCA Plan clearly identify the need to provide continued diversity, both environmental and economic, as a product of successful restoration of the coastal ecosystem. While this applies more directly to the ecologic components of the system it applies indirectly to the human environment as well. Protection of vital socio-economic resources is one of the critical needs elements addressed by the near-term LCA Plan (Critical Needs Criterion #4) used to select LCA Plan components. The proposed restoration features in the LCA Plan address the need to support and protect such resources as cultures, communities, infrastructure, business and industry. Tradeoffs in system use will be necessary to accomplish effective coastal restoration and these will include human impacts. The implementation of the LCA Plan will seek to avoid or minimize these to the maximum extent possible. Please refer to Section 3 of the LCA Plan for a detailed discussion of how the critical needs criteria were applied to select LCA Plan components.

Letter 26: Mr. Ralph L. Herrmann – EIS (RLH-EIS)

RLH-EIS 05

3. Specifically, the proposed Myrtle Grove "medium" diversion; what are you comparing this to? Wouldn't this proposed diversion be the largest ever built? To compare, the Davis Pond Diversion at 10,000 cfs that is still not working properly as the retention ponds have just been redesigned as these did not work and now the attempt for reauthorization for marsh building……trial and error that may or may not succeed all addressed in one Environmental Impact Statement.

These issues need to be addressed and met on in each community that has been impacted in the past and will be in the future and not addressed by a "one size fits all" mindset. Please provide written response to my questions and requests.

RLH-EIS 06

Sincerely,

Ralph L. Herrmann

Ralph L. Herrmann

RLH-EIS 04: Pursuant to 40 CFR Part 1502.28 and as described in Section 1 "National Environmental Policy Act (NEPA) Requirements" of the FPEIS, this present statement will serve as a programmatic analysis for restoration efforts that will concentrate on coast-wide province-wide and basin-wide issues. Tiering, as discussed in Part 1502.28 of the NEPA, refers to coverage of general matters in broader environmental impact statements with subsequent narrower statements or environmental analysis incorporating by reference the general programmatic statements and concentrating solely on the issues specific to the statement subsequently prepared. Because this is a Programmatic EIS, it is considered a "tiered" document. Feasibility-level detailed decision documents will be developed on a project-by-project basis for each of the near-term critical restoration features. On a project-by-project basis, the required NEPA process will be conducted to present selected alternatives and garner public comment.

RLH-EIS 05: In the LCA Plan, diversions were referred to as either small (1,000 – 5,000 cfs diversion), medium (5,000 – 15,000 cfs diversion), and large (greater than 15,000 cfs). The medium diversion with dedicated dredging at Myrtle Grove is described in Section 2 of the FPEIS as a 2,500 to 15,000 cfs, thus qualifying it as a "medium" diversion. Specific details the benefits and impacts of the proposed restoration feature will be determined during project implementation.

RLH-EIS 06: As the LCA Plan transitions from plan formulation to plan implementation, there would be opportunities for public participation and input. For each of the LCA Plan projects, the requisite decision documents, NEPA documents, and accompanying public participation process would be completed. During this time, the public would have the opportunity to comment on the scope of issues, resources, impacts, and alternatives to be addressed in the DPEIS. During periods when official public or scoping meetings are not being held, the USACE, in coordination with the state of Louisiana, would keep the lines of communication open through web site interaction, speaking engagements, workshops, news releases, timelines, frequently asked questions, fact sheets, and talking points. To that end, a Public Involvement Plan would be established that clearly defines a proactive, consistent, and cohesive procedure for informing the public of the LCA Plan process and the development of the LCA Plan.

Letter 27: Mr. Ralph L. Herrmann – Main Report (RLH-MR)

August 22, 2004

Mr. Tim Axtman
CEMVN-PM-C
P. O. Box 60267
New Orleans, LA 70160-0267

Dear Sir:

RLH-MR 01

This is a request for a time extension to the comment period regarding the Louisiana Coastal Area Draft Programmatic Study Report - Ecosystem Restoration Plan. Also, I am requesting that a public hearing be held on the west bank, in Belle Chasse where scoping meetings were held in the past with considerable public interest. When we spoke at one of the meetings, this Louisiana Coastal Area Plan did not seem to be in existence. When numerous people asked different questions, the response was "We don't have that information yet." Now some of those same people, who participated at that time, do not even know about this yet. The meetings held in July were inconvenient to many of the people directly involved and not enough notification to plan to attend as people vacation at that time of year.

RLH-MR 02

RLH-MR 03

Mr. Kerry St. Pe', the Director of the Barataria-Terrebonne National Estuary Program and Interim Administrator of the Louisiana Universities Marine Consortium addressed some of his concerns at one of the meetings held in July. He has provided specific comment regarding the draft LCA restoration plan human component and scientific environmental analysis that does not agree with your criterion application strategy in his letter to you dated August 3, 2004. Looking back over my subject notes from the scoping meetings, those meetings have been rendered meaningless and a waste of time by this document that is specifically lacking the human component.

1. This "one size fits all" document does not address the needs nor take a good look at individual communities within its scope i.e. Myrtle Grove Marina Estates and Ironton (an elderly minority community) existing side by side and the entire St. Bernard Parish.

RLH-MR 04

RLH-MR 05

2. Specifically, the proposed Myrtle Grove "medium" diversion; what are you comparing this to? Wouldn't this proposed diversion be the

RLH-MR 01: Please see response to RLH-EIS 01.

RLH-MR 02: Please see response to RLH- EIS 02.

RLH-MR 03: Please see response to RLH- EIS 03.

RLH-MR 04: Please see response to RLH- EIS 04.

RLH-MR 05: Please see response to RLH- EIS 05.

Letter 27: Mr. Ralph L. Herrmann – Main Report (RLH-MR)

RLH-MR 05 (Continued)

largest ever built? To build ridges, the volume of flow would have to be so large that the result would be a totally unacceptable salinity level (ie St. Bernard Parish) to both the human and wildlife habitat.

RLH-MR 06

These issues need to be addressed and met on in each community that has been impacted in the past and will be in the future and not addressed by a "one size fits all" mindset. Please provide written response to my questions and requests.

Sincerely,

Ralph L. Herrmann

Ralph L. Herrmann

RLH-MR 06: Please see response to RLH- EIS 06.

Letter 28: Ms. Kandy Theriot, Houma-Terrebonne Chamber of Commerce (HTCC)

Houma ~ Terrebonne
CHAMBER of COMMERCE

6133 Hwy. 311
Houma, LA 70360

Phone: (985) 876-5600
Fax: (985) 876-5611

www.houmachamber.com

August 23, 2004

U.S. Army Corps of Engineers
Attention: Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Subject: **Louisiana Coastal Area (LCD) Ecosystem Restoration Study**

Dear Mr. Axtman:

The Houma-Terrebonne Chamber of Commerce (HTCC) is pleased to offer the following comments regarding the Louisiana Coastal Area Study. The HTCC understands the importance of the LCA Ecosystem Restoration Project for the State of Louisiana and its significance to the entire United States of America. Our Chamber supports these efforts to reduce coastal erosion and reverse its impacts on the coastal communities of Louisiana.

HTCC 01

Any restoration measures, which result in the preservation of coastal marshes in the Terrebonne basin, are critical to our economy, culture, and sustainability. Special consideration should be given to the Third Delta project feature, sediment reintroduction and hurricane protection measures, such as the Morganza to the Gulf Hurricane Protection Project. It is important to recognize that a coastline bereft of human inhabitants is of no value to our parish or the United States, as such human needs such as flood protection, commercial and recreational fishing, maintaining the infrastructure of the oil and gas industry, and hurricane evacuation routes is important to our communities, economically, socially and environmentally.

HTCC 02

Additionally, the plan calls for multi-purpose operation of the Houma Navigation Canal Lock. The HTCC fully supports multi-purpose operation of the Houma Navigation Canal Lock for environmental enhancement so long as it is operated to protect residents and property from tropical storms and hurricanes. Multi-purpose operation of the Houma Navigation Canal Lock in sub-province 3 could negatively affect navigation. The multi-purpose use of the Houma Navigation Canal Lock will significantly increase the frequency of its operation over its intended use as a hurricane protection structure. Likewise, the operation and maintenance cost of the lock will increase significantly. The local sponsor of the Morganza to the Gulf Hurricane Protection Project, that includes the Houma Navigation Lock, the Terrebonne Levee and Conservation District must be compensated for the increased O&M cost associated with the continual operation of the locks facilities for coastal restoration purposes provided this is not a federal function.

HTCC 03

Coastal wetlands restoration, hurricane evacuation routes, flood control infrastructure and hurricane protection projects are necessary to the Louisiana coastal area's human and ecological needs. The HTCC supports the LCA project and project implementation should begin as quickly as possible. We also recognize that the LCA project must acknowledge that maintaining and improving the socio-economic diversity of the coastal region is not anathema to ecological restoration.

Sincerely,

Kandy Theriot
President/ CEO

HTCC 01: Comment noted. The Mississippi River Hydrodynamic Study will provide information on hydrologic processes and conditions that will support implementation of the Third Delta Study. The long-term study will address data needs for restoration projects that cannot, based on existing information, be initiated within the ten-year time frame. Protection of inhabited areas, infrastructure, and economic assets were considered in selection of the projects for inclusion under Critical Needs Criterion #4: Protects Vital Socio-Economic Resources.

HTCC 02: The LCA Restoration Feature, *Multi-purpose Operation of the Houma Navigational Canal Lock*, is to make efficient use of the Atchafalaya River by increasing river flows into the wetlands to maintain favorable salinity regimens. However, the current plan for the Morganza to the Gulf Project is to close the lock for an estimated 78 days of high-water events due to tropical storms and hurricanes (+3 NGVD). The HNC Lock physical model being constructed (operational by early 2005) at ERDC will test several possible operational schemes for the lock (e.g., 25 percent and 50 percent open). Normal operation is fully open lock and fully open 200' floodgate. USACE is currently investigating whether a lock of this magnitude (110' x 800') will have considerable O&M problems if it is operated like one of the other smaller floodgates or environmental water control structures. USACE will satisfy all requirements to assure that the local environment is protected, flood protection provided to all residents, and the HNC remains navigable to all marine vessels. O&M costs for the restoration component of the project are the responsibility of the non-Federal sponsor.

HTCC 03: Comment noted.

Letter 29: Honorable Carl R. Griffith, Jr., Jefferson County Judge (CRG)

Carl R. Griffith, Jr.
County Judge

Jefferson County Courthouse
P. O. Box 4025
Beaumont, Texas 77704

Beaumont 409-835-8466
Pt. Arthur 409-727-2191, ext. 8466
Facsimile 409-839-2311

August 16, 2004

Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Axtman:

CRG 01

As the County Judge of Jefferson County, Texas, I respectfully request that the New Orleans District not limit the Louisiana Coastal Area (LCA) ecosystem restoration study by political or Corps of Engineers boundaries, as is currently the plan. Using such boundaries to limit the scope of the LCA study completely disregards the watershed and geological realities of the Gulf region, all of which is experiencing tremendous loss of wetlands and other vital ecosystems.

We in coastal Jefferson County and the Sabine-Neches watershed are experiencing the same problems coastal Louisiana is experiencing. The physical processes (both natural and manmade) and risks of loss are the same on the west side of Sabine-Neches watershed (in Texas, within the Corps' Galveston District and Southwest Division) as on the east side (in Louisiana, within the Corps' New Orleans District and Mississippi Valley Division).

Jefferson County—and, I feel certain, other communities in Southeast Texas—would be happy to endorse and work for the adoption of an LCA restoration plan as an important national priority assuming the entire Sabine-Neches watershed and coastal Jefferson County is incorporated, regardless of the fact that a political boundary separates us from Louisiana.

I am sure the Galveston District would be happy to provide more detailed information about how Southeast Texas coastal resources and its economy are affected by natural and manmade influences and describe viable solutions.

CRG 01: For planning purposes, the LCA study area includes Louisiana's coastal area from Mississippi to Texas. This area was divided into four subprovinces, each of which is comprised of several distinct hydrologic basins. The New Orleans District and the State of Louisiana are presently concentrating restoration efforts on near-term critical ecological needs within these four coastal Louisiana subprovinces. As implementation progresses, the New Orleans District will continue to coordinate with the Galveston District regarding potential restoration needs and impacts.

Please see General Response #3 regarding the LCA Study Area.

Letter 29: Honorable Carl R. Griffith, Jr., Jefferson County Judge (CRG)

Mr. Tim Axtman
August 16, 2004
Page 2,

Thank you for allowing my comments to the Louisiana Coastal Area study on behalf of the citizens of Jefferson County, Texas. We look forward to the final plan for the entire coastal region.

Sincerely,

Carl R. Griffith, Jr.
County Judge
Jefferson County, Texas

Letter 30: Mr. Aaron Broussard, Jefferson Parish President (JFP)

JEFFERSON PARISH
LOUISIANA

OFFICE OF PARISH PRESIDENT

AARON F. BROUSSARD
PARISH PRESIDENT

August 23, 2004

Mr. Timothy Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Dr. William P. Klein, Jr.
CEMVN-PM-RS
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on "Draft" LCA Ecosystem Restoration Study (ERS) and "Draft" Programmatic Environmental Impact Statement (DPEIS)

Dear Mr. Axtman and Dr. Klein:

As Parish President of Jefferson Parish, I first want to thank the U.S. Army Corps of Engineers and its federal and state partners for the opportunity to comment on the "Draft" Louisiana Coastal Area (LCA) Ecosystem Restoration Study and the "Draft" Programmatic Environmental Impact Statement (DPEIS).

Jefferson Parish has been looking forward to the implementation of the COAST 2050 Plan since its completion in December 1998, and we are excited that we are now finally initiating the process to implement the plan through the LCA.

JFP 01

Although it is not all we had hoped for, and it does not nearly provide the full solution to our coastal land loss, we feel it does represent an important first step. The Bush Administration's support of this $1.9 billion for a plan to begin restoring Louisiana's eroding coastline indicates that there is awareness, at the national level, of the significance Louisiana's wetlands play in the national economy, energy supply, and general well-being of our great nation.

JFP 02

With that in mind and with the need to take immediate action, Jefferson Parish strongly supports the LCA Near-Term Plan's inclusion of a medium diversion with dedicated dredging at Myrtle Grove. We urge that this diversion incorporate sediment delivery via pipeline, which has been proven as an effective means of building marsh and would allow the project to build a significant amount of wetlands without over-loading the basin with freshwater. The leveeing of the Mississippi River, which benefited the entire country, had the unintended negative effect of cutting off the Barataria Basin off from the river's nourishing spring overflow of water and sediments. This loss of sediments, water, and nutrients contributed to this basin becoming the fastest eroding area in the state. Consequently, a sediment diversion at Myrtle Grove, which was included in the Coast 2050 Plan as a critical component of the Barataria Basin and was identified

SUITE 1002 - 1221 ELMWOOD PARK BOULEVARD - JEFFERSON, LOUISIANA 70123
P. O. BOX 10242 JEFFERSON, LOUISIANA 70181-0242 - (504) 736-6400

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JFP 01: Comment noted.

JFP 02: Comment noted. The Myrtle Grove diversion is part of the five near-term critical restoration features being recommended for conditional authorization.

Letter 30: Mr. Aaron Broussard, Jefferson Parish President (JFP)

JFP 02 (Continued)

as Jefferson Parish's number one priority project (even though it is in Plaquemines Parish) in its *1992 Comprehensive Wetland Conservation and Restoration Plan*, needs to be constructed as soon as possible.

JFP 03

In addition, we also support the Barataria Basin Barrier Shoreline Restoration Project which will restore our fragile, but essential Barrier Island chain. These Barrier Islands are a critical component of our state's fragile coast and their survival is critical to a long-term sustainable ecosystem.

JFP 04

We also support St. Bernard Parish's contention that the LCA Plan's $80 million proposal to place rock along the Mississippi River Gulf Outlet (MRGO) at Lake Borgne be reconsidered, and we urge that the plan instead focus on an alternative project that would restrict salt water intrusion and tidal surge through the channel.

JFP 05

Although we support the abbreviated LCA Near-Term Plan, we want to stress that this should be considered a starting point for the much larger, comprehensive restoration plan that is essential to saving Louisiana's coast. Louisiana's needs are urgent and massive. It is essential to the well being of this entire nation that a reliable, steady stream of revenue be earmarked to provide the long-term solution to our state's continuing loss of wetlands and its associated natural resources.

The National Atmospheric and Oceanic Administration (NOAA) recently announced that this year's Atlantic hurricane season could bring above normal activity with the possibility of 12 to 15 tropical storms; 6 to 8 of these could become hurricanes with 2 to 4 becoming major hurricanes. Louisiana is already losing 24 square miles of wetlands per year. A major hurricane would exacerbate this land loss, and without wetlands as a buffer, pipelines, refineries, ports, roads and bridges, all of which are vital to energy delivery, are more vulnerable and the potential for damage increases. Failure to provide the estimated $14 billion dollars needed over the next 30 years to address the erosion of Louisiana's wetlands will have costly consequences for the state and the nation as a whole, which relies on fisheries and oil and gas production from Louisiana's coast.

Again, Jefferson Parish appreciates this opportunity to comment, and we support the LCA Near-Term Plan as an important first step in addressing the national crisis that is happening here – the continuing loss of America's Wetland.

Sincerely,

Aaron F. Broussard
Parish President

JFP 03: Please see response to JFP 02.

JFP 04: Comment noted. Please see General Response #1 regarding the proposed MRGO Restoration Feature.

JFP 05: Comment noted. Please see General Response #5 regarding the ten-year planning horizon.

Letter 31: Mr. Jess Curole, Lafourche Parish Government (LPG)

Lafourche Parish Government
P.O. Drawer 5548 • Thibodaux, Louisiana 70302 • Telephone (985) 446-8427
Thibodaux (800) 834-8832 Fax 446-8459 • Raceland (800) 794-3160 Fax 537-7707
Charlotte A. Randolph, *Parish President*

August 23, 2004

Mr. William Klein, Jr.
U.S. Army Corps of Engineers
CEMVN-RS
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Klein

My name is Jess J. Curole. I am the Administrator of the Lafourche Parish Coastal Zone Management program. I am sending these comments on behalf of Lafourche Parish CZM and as a Barataria-Terrebonne National Estuary Program Management Conference Member. We are pleased to submit comments on such an important plan for the survival of South Louisiana and the people who live in this special place. We commend the effort of all who have worked so hard to put this plan together and move it forward as quickly as possible. We understand that this plan is the best plan for the limited amount of funds available for this restoration effort and for our region.

LPG 01

One of the most important aspects of this plan is public acceptance. With out the public behind this plan, it will not move forward in a timely fashion. We understand that engineering and science will be the most important aspect of achieving this plan but it needs to be accepted by everyone. For example, freshwater diversions could greatly change the fresh, brackish, and saline systems, which could have a negative impact. The people who use these systems for their survival need to be assured that these systems will still exist.

LPG 02

As a member of the Barataria-Terrebonne National Estuary Program Management Conference, I support the comments submitted by the BTNEP regarding the Near-Term LCA Ecosystem Restoration Plan strategies. At a management conference meeting, we discussed the selection and justification of certain restoration projects proposed under the LCA program within the Barataria-Terrebonne estuary. A cross section of scientist, researchers and administrators gave their input on why certain restoration techniques should be considered and which projects are most essential to rebuilding the estuary. The comments submitted capture the sense of urgency and convey the legitimacy and feasibility for using sediment delivered via pipeline from dedicated dredging. This technology has already shown proven success worldwide. These proposals are of vital importance and represent sound science. We are pleased to see the pipeline sediment delivery concept in this draft plan, but it needs to be implemented as a proposed project in this plan.

LPG 01: Public acceptability is an essential component of the LCA Study Plan Formulation Rationale and is discussed in the Main Report, Section 3. Furthermore, public meetings have been and will continue to be held to garner public involvement throughout LCA Plan implementation, either on a subprovince or project-by-project basis. In addition, USACE and state experts involved with all facets of the LCA Plan will be available through a Speakers Bureau to address civic, social, business, and educational groups. A newsletter mailed periodically will keep the public updated on the latest events related to LCA Plan implementation. For additional information, contact Julie T. Morgan, Outreach Program Specialist, Coastal Restoration Branch, (504) 862-2587.

LPG 02: Please see General Response #9 regarding sediment transport via pipeline. Furthermore, sediment delivery via pipeline and dedicated dredging are included as both components of individual features (e.g., Myrtle Grove Diversion) and as part of the Programmatic Authority for the Beneficial Use of Dredged Material.

Letter 31: Mr. Jess Curole, Lafourche Parish Government (LPG)

Lafourche Parish Government
P.O. Drawer 5548 • Thibodaux, Louisiana 70302 • Telephone (985) 446-8427
Thibodaux (800) 834-8832 Fax 446-8459 • Raceland (800) 794-3160 Fax 537-7707
Charlotte A. Randolph, *Parish President*

LPG 03 In conclusion, we thank you for accepting our comments and suggestions for this vital plan. This has be a collective effort my many and everyone needs to be thanked. In the end we will need more funding and more projects for our survival.

Thanks

Jess Curole

Jess Curole
Administrator
Lafourche Parish CZM
101 West 112th Street
Cut Off, LA 70345

LPG 03: Comment noted.

Letter 32: Mr. Carleton Dufrechou, Lake Pontchartrain Basin Foundation (LPBF#1)

SAVE OUR LAKE
LAKE PONTCHARTRAIN BASIN FOUNDATION

July 27th, 2004

Mr. Tim Axtman
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Environmental Planning and Compliance Branch
CEMVN-PM-RS
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Tim:

The Lake Pontchartrain Basin Foundation's (LPBF) has reviewed the draft Study Report for the Louisiana Coastal Area (LCA). The LPBF strongly supports restoration and preservation of Louisiana's coast. Our comments following are limited to the two "near-term critical restoration features" indicated in the report for the Pontchartrain Basin (Sub province 1).

LPBF#1 01

The LPBF supports the proposed Small Diversion at the Hope Canal. We believe that this 1,000 to 2,000 cfs diversion will benefit the swamps along the southwest corner of Lake Maurepas. The area has suffered from hydrologic modification, subsidence, and saltwater intrusion. This proposal appears to mimic historic processes (river overflows into adjacent wetlands) for the area. This proposal should help restore more natural hydrology, enhance vegetation growth, and improve swamp health.

LPBF#1 02

The LPBF cannot support the Mississippi River Gulf Outlet (MRGO) restoration features as proposed. The report provides an excellent problem identification. The last two sentences of the first paragraph of section 4.2.3.1.1 describe the problem well stating: " During construction of the MRGO, dredging and filling destroyed more than 17,000 acres of wetlands, and an important hydrologic boundary was breached when the channel cut through the ridge at Bayou LaLoutre. After the MRGO was completed, significant habitat shifts occurred because the impacted area converted to a higher salinity system as a result of saltwater intrusion. Continued operation of the MRGO results in high rates of shoreline erosion from ship wakes, which destroy wetlands and threatens … shoreline and adjacent communities, infrastructure, and cultural resources. In addition, severe erosion of the MRGO channel continues to facilitate the transition of the upper Pontchartrain Basin estuary toward a more saline system." Paragraph three continues: "Rapid action is required … to prevent continued erosion of the MRGO … by ocean going vessels wakes. Without action, critical landscape … will be lost and future efforts to restore … the ecosystem would be more difficult and expensive."

Three Lakeway • Suite 2070 • 3838 North Causeway Blvd. • P.O. Box 6965 • Metairie, Louisiana 70009-6965
(504) 836-2215 • Fax: (504) 836-7070
www.saveourlake.org

LPBF#1 01: Comment noted and concur.

LPBF#1 02: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 32: Mr. Carleton Dufrechou, Lake Pontchartrain Basin Foundation (LPBF#1)

Mr. Tim Axtman
July 27th, 2004
Page 2

To address these problems, the report recommends construction of rock dikes along the north bank of the MRGO, construction of rock dikes along segments of the Lake Borgne shoreline, and beneficial use of dredge material to enhance wetland creation behind the rocked dikes. The recommendation proposes spending $80 to $100 million to basically expand existing practices. Practices like rocking which have a history of failure along the MRGO. At best, these practices may, at specific sites, inhibit potential future shoreline breaches and reduce related land loss. This recommendation is mitigation; it is definitely not restoration. The recommendation is not cost effective. The recommendation does not begin to address the problems identified by the report. The root cause of the all the problems identified is dredging and deep draft vessel operations.

Review of LCA public meeting records will show that throughout the two-year process, Pontchartrain Basin citizens overwhelmingly recommended closure of the MRGO. Closure is defined as elimination of channel maintenance dredging, relocation of the three remaining MRGO facilities serviced by ships, and construction of a navigation structure to restore the Bayou LaLoutre ridge.

While the LPBF appreciates the opportunity to participate in the LCA process, we, like most Pontchartrain Basin citizens, are very disappointed by the report's MRGO recommendation and frustrated by the apparent disregard LCA agencies have for the public's input and for the MRGO closure plan. Simply put, the current LCA recommendation proposes using coastal restoration funding to perpetuate a deep draft navigation project. A project that the LCA report accurately identifies as the source of an environmental disaster. The recommendation does not restore or even sustain the coast. Rather, it sustains deep draft navigation on an obsolete and rarely used channel in the name of restoration. This is flatly wrong.

The MRGO is the most significant environmental impact to this region of Louisiana's coast. If we are serious of about coastal restoration in the Pontchartrain Basin, anything less than closure of the MRGO is futile. The closure plan should be the MRGO recommendation in the final LCA report. We request the opportunity to meet with the Project Delivery Team to discuss revising the LCA's MRGO recommendation to include closure.

LPBF#1

LPBF#1 02 (Continued)

Very truly yours,

Carlton Dufrechou

Carlton Dufrechou
Executive Director

ht:
Axtm072704

Letter 33: Mr. Carleton Dufrechou, Lake Pontchartrain Basin Foundation (LPBF#2)

SAVE OUR LAKE
LAKE PONTCHARTRAIN BASIN FOUNDATION

July 30, 2004

Mr. Troy Constance
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Troy:

The Lake Pontchartrain Basin Foundation's (LPBF) strongly supports restoration and preservation of Louisiana's coast. We have reviewed the draft Louisiana Coastal Area (LCA) Study Report for the Pontchartrain Basin (Sub province 1) and submitted our comments during the July 27 Chalmette meeting.

LPBF#2 01

As we indicated during the July 27 LCA meeting, the LPBF supports the proposed Small Diversion at the Hope Canal. We believe that this project could benefit the swamps along the southwest corner of Lake Maurepas. The LPBF cannot support the Mississippi River Gulf Outlet (MRGO) restoration features as proposed. The MRGO recommendation proposes spending $80 to $100 million to basically expand existing practices. Practices like rocking which have a history of failure along the MRGO. In our opinion, this recommendation is mitigation; it is not restoration. The recommendation does not begin to address the problems identified by the report. The root cause of the all problems identified is dredging and deep draft vessel operations.

LPBF#2 02

Throughout the two-year LCA public participation process, Pontchartrain Basin citizens have overwhelmingly recommended closure of the MRGO. Closure is defined as elimination of channel maintenance dredging, relocation of the three remaining facilities serviced by ships using the MRGO, and construction of a navigation structure to restore the Bayou LaLoutre ridge.

The MRGO is the most critical coastal restoration issue for Sub province 1. We strongly believe that the closure plan should be the MRGO recommendation in the final LCA report. We request to meet with the Project Delivery Team to discuss including the MRGO closure plan in the final LCA report.

Very truly yours,

Carlton Dufrechou
Executive Director

Cc: LA Congressional Delegation
President Henry Rodriguez, St. Bernard Parish

Three Lakeway • Suite 2070 • 3838 North Causeway Blvd. • P.O. Box 6965 • Metairie, Louisiana 70009-6965
(504) 836-2215 • Fax: (504) 836-7070
www.saveourlake.org

LPBF#2 01: Comment noted.

LPBF#2 02: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 34: Ms. Jean Armstrong and Ms. Linda M. Walker, League of Woman Voters of Louisiana (LWV)

August 19, 2004

League of Women Voters of Louisiana
P.O. Box 4451
Baton Rouge, LA 70821-4451

Dr. William P. Klein, Jr., PEIS Manager
U.S. Army Corps of Engineers, CEMVN-PM-RS
P.O. Box 60267
New Orleans, LA 70160-0267

LEAGUE OF WOMEN VOTERS OF LOUISIANA
COMMENTS

PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
LOUISIANA COASTAL AREA ECOSYSTEM RESTORATION STUDY

The U.S. Army Corps of Engineers has accomplished the seemingly impossible task of sifting through the comprehensive Louisiana Coastal Area Ecosystem Restoration Study and the scoping comments to create the draft near term plan. The needs have been carefully weighed against the anticipated resources and within the jurisdiction of the Corps.

LWV 01

The major short-comings of the plan can be traced directly to the shortened time frame for implementation and the limited funding assigned to the program plus the jurisdictional powers of the Corps. The time frame and limited funding miss the purposes of the needed program, which are permanent conservation, massive restoration, and continuous maintenance of the restored features. The jurisdictional constraints on the Corps limit their powers to address all of the problems in the context of all the consequences. The ultimate cost to the nation will be far greater than the estimated amount to achieve the long-term comprehensive Louisiana Coastal Area Restoration.

The League has some of the following concerns:

- The permitting activities for wetland uses administered by the Corps must be integrated into the program. Whether they are on public or private lands, permitted uses on wetlands in the LCA must serve to conserve or sustain favorable conditions. While current property value uses may be challenged, it would be counter to the program to have more persons and ultimate property uses placed at risk. Additionally, the cumulative effects of increasing developed properties contributes to the loss of buffer zones essential to safety.

LWV 02

LWV 01: Please see General Response #5 regarding the ten-year planning horizon and General Response #10 regarding proposed LCA Plan funding.

LWV 02: All impacts to wetlands and waters including LCA Plan projects are carefully considered to protect the overall public interest in the regulatory evaluation process. Individual projects implemented under the LCA Plan will be required to comply with applicable environmental compliance and permitting programs. In addition, the approval of the proposed LCA Plan would provide a basis for environmental consistency for all subsequent water resources related activities in the study area. This would not, however, in any way supercede the valid existing rights of landowners and leaseholders under existing statutes.

Letter 34: Ms. Jean Armstrong and Ms. Linda M. Walker, League of Woman Voters of Louisiana (LWV)

LWV 03

- Given the conclusion that utilizing the resources of the river system will be the most sustainable over time, it is imperative that the large scale restoration studies of the Mississippi River Delta Management Study, the Third Delta Study and Upper Atchafalaya Study (with related issues) be implemented immediately. These programs should be moved as quickly as possible to a priority status position in seeking authorization from Congress. To move too slowly on true restoration will result in more irreplaceable losses.

LWV 04

- In conjunction with the aforementioned studies, the Parishes comprising the upper reaches of the Atchafalaya watershed should be brought into the LCA and included in all future planning.

LWV 05

- The construction of rock breakwaters in the Mississippi River Gulf Outlet and along segments of Lake Borgne are stopgap mitigation projects to prevent further degradation of freshwater marshes and intrusion into Lake Borgne. Considering that the economic evaluation of operation and maintenance of the Mississippi River Gulf Outlet will be released soon, it should be acknowledged that this portion of the draft program is incomplete at this time. If funds used in dredging can be re-allocated to closure and greater restoration, then the Corps should be ready to act as soon as possible. Although navigation economics drove the original authorization, the environmental costs that have been externalized over the life of the Mississippi River Gulf Outlet cannot be ignored in any meaningful analysis.

LWV 06

- Also, now is the time to establish compact agreements with adjacent states and the federal and state agencies serving those states. The Governor's Office with the Louisiana Department of Natural Resources could be the lead agency for this endeavor. This should be done to ensure that the purposes of the LCA program are given first priority in any activities that would interface or impact the Louisiana coast. Other possible advantages of compact agreements would be to help subsidence problems on the Texas Coast and in the event of storm events in Louisiana forestall the impact of refugees on the socio-economic resources of adjacent states. Also, this would give weight to the issue in further efforts to garner federal funding from the U.S. Congress.

LWV 07

- Some portion of the Science and Technology Program Demonstration Projects should be used to initiate the kinds of projects that would involve direct public participation. The value of this in educating the public and enlisting support has been amply demonstrated by the Christmas tree collection efforts. This could be done as part of the State's share of support. An example of other public participation projects could be volunteer plots growing marsh grasses for transplanting into wetlands. Restaurants and processing plants could be mobilized to donate burlap-bagged oyster shells. A demonstration project to test the use of bagged oyster shells to stabilize a selected barrier island or cross-diking canals would have great public relations value.

LWV 03: Please see General Response #8 regarding project implementation protocols and the need for immediate action

LWV 04: Please see General Response #3 regarding the LCA Study Area.

LWV 05: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

LWV 06: The establishment of regional or interstate agreements to support restoration objectives and implementation may be beneficial to the overall restoration effort. As regional or interstate agreements, they would be the preview of the state to establish as the local cost-share sponsor. Any incorporation of these agreements relative to the LCA Plan would be a subsequently negotiated matter between the Federal and state cost-share partners.

LWV 07: The USACE is in the early stages of planning demonstration projects and specific restoration measures still need to be determined. Once authorized, techniques using hands-on public involvement will be publicized on a project-specific basis to the greatest extent to notify possible volunteers and garner additional public support.

Letter 34: Ms. Jean Armstrong and Ms. Linda M. Walker, League of Woman Voters of Louisiana (LWV)

- Other short term cooperative projects that can be completed concurrently should be encouraged. Closing canals to preserve fresh water wetlands is an example of short term projects that could be funded by outside sources such as industry grants. These projects could be directed by the Louisiana Department of Natural Resources with site and project selection decided by local governments and by citizen participation. LWV 08

- As the Science and Technology Program Demonstration Projects move forward the results should be highly publicized nationally. The same is true for all the components of the LCA. The need for further restoration must be recognized at the national level. The general public must feel an ownership and be completely informed. If the Corps and the State must go back to Congress for authorization of at least ten of the identified near-term projects and for the necessary funds to do major restoration, then support has to be built. LWV 09

- As the program moves forward, the State's yearly financial obligations for property values, cost sharing, operation and maintenance, and other expenses must be clearly stated in advance. A comprehensive report to each session of the State Legislature would benefit State participation. The political leadership and public should be aware of actual costs and value. LWV 10

- Other agencies that have not previously participated should be included as the program goes forward. Because of the infrastructure responsibilities, the U.S. Department of Energy and the U.S. Department of Transportation as well as the Louisiana Department of Transportation and Development should incorporate the LCA goals and criteria into their planning. LWV 11

While the League of Women Voters along with other citizens and groups recognizes that Louisiana's coastal problems will not be fully addressed with the near-term program, we do support this effort as a starting point. At best the near-term plan will hold the line to further degradation at some places and minimal restoration will be accomplished for some others. The net result will be a slowing down of loss, rather than halting the loss with sustainable rebuilding. Much more effort must go toward authorizations and re-authorizations. We can only hope that as much as possible can be salvaged before it is too late to restore irretrievable fragile wetlands and barrier islands.

Respectfully submitted by:

Jean Armstrong, President
League of Women Voters of Louisiana

Linda M. Walker, Water Resources Chair
League of Women Voters of Louisiana

LWV 08: Comment noted.

LWV 09: Future outreach strategies include a national media blitz, scoping and informational public meetings to involve those interested individuals and stakeholders on the local level. Participation in national conferences related not only to the environment but also to business and specialized audiences is also planned. Additionally, information is provided nationwide via a mailing list that includes addresses throughout the United States.

LWV 10: The decision documents specified for approval prior to initiation of construction will be required to include detailed costs including those for lands, easements, rights-of -way, relocations, and damages. These detailed costs, as well as the distribution of their outlay, are necessary for both the Federal and state cost-share partners to establish budgets and work schedules.

Financial information regarding the LCA Plan is part of the public record and is available for public review.

LWV 11: Comment noted. Please see General Response #4 regarding the coordination roles for agencies and local governments in the LCA Study.

Letter 35: Dr. Barry Kohl, Louisiana Audubon Council (AUBN)

Louisiana Audubon Council
1522 Lowerline St., New Orleans, Louisiana 70118-4010

August 22, 2004

Dr. William P. Klein
CEMVN-PM-RS
New Orleans District, USACE
P.O. Box 60267
New Orleans, LA 70160

Re: La Coastal Area Ecosystem Restoration Study, Vols. 1 & 2; Main Report and Draft Programmatic Environmental Impact Statement (DPEIS).

Dear Dr. Klein,

The following comments are prepared by the Louisiana Audubon Council. We have reviewed the Louisiana Coastal Area (LCA) Ecosystem Restoration Study including the Main Report and DPEIS and request that this letter be included in the Final Programmatic Environmental Impact Statement (FPEIS) and that our following comments be addressed in the FPEIS.

AUBN 01

Mississippi River Gulf Outlet (MRGO):

The FPEIS should include a plan for closure of the MRGO. This waterway is one of the major contributors to adverse environmental impacts in Subprovince 1. Continuing to dredge the MRGO is inconsistent with the goals of the LCA. Just considering environmental restoration features along the MRGO as part of the LCA plan is insufficient. The cause of the erosion problems should be fixed not just the results. The Corps must accept its mistake in creating one of the more environmentally destructive projects in the state. The Corps must develop, as part of the LCA plan, a procedure to deauthorize the MRGO with the provision that salt water intrusion into fresh water marshes and Lake Pontchartrain will be stopped. Tidal surges using the MRGO carry contaminated sediments from the IHNC into Lake Pontchartrain. This is continuing to damage the Lake's ecosystem. The Corps noted in the DPEIS (Sec. 1.9.6) that a Reevaluation Study of the MRGO, "is tentatively scheduled for completion by September 2004". We request that the conclusions of the study be included in the Final PEIS.

AUBN 02

Funding for the Regulatory Branch:

In order to properly regulate development in areas to be impacted by the LCA projects, the Regulatory Branch of NOD must be funded from the LCA budget to provide additional resources needed to insure inspection and enforcement of projects related to the LCA. An increased budget for Regulatory Branch would provide additional resources and employees who could be dedicated to CWPPRA and LCA projects. Presently the Enforcement Section is understaffed and the number of permit inspectors is insufficient to handle existing permit applications or to assure that permittees are in compliance with conditional permits. The lack of adequate field inspections promotes permit violations. New Orleans District Corps does not have sufficient staff to find and stop illegal work in wetlands of the Coastal Zone.

To require an additional workload related to the LCA projects without increasing the Regulatory staff, would cause additional morale problems in the Regulatory Branch and would be

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AUBN 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

AUBN 02: Funding for the USACE-MVN Regulatory Branch is outside of the scope of the LCA Program. Funding for the monitoring and enforcement programs are dependent on the authorization of the USACE budget by Congress, and by allocation of resources under these appropriations made by the Secretary of the Army.

USACE is currently developing an Enterprise GIS which will assist regulatory in its evaluation of all project impacts, especially cumulative impacts. Additional resources could provide for a more robust enforcement and compliance program.

For additional information, please also see General Response #10 regarding proposed LCA Plan funding.

Letter 35: Dr. Barry Kohl, Louisiana Audubon Council (AUBN)

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AUBN 02 (Continued)

a clear signal that Col. William Conner's (NOD) comments were correct when he stated,

"Regulatory [NOD] is deliberately underfunded each year as part of the grand game of give and take between private interests and public oversight." (Conner, 1999. see attachment).

We request that the FPEIS include a statement of support for funding Corps' Regulatory personnel who are specifically assigned to either regulate or coordinate permitting related to LCA projects.

AUBN 03

Interagency Task Force or Team:

Likewise, with other federal resource agencies working with the Corps (NOD) to coordinate individual LCA projects in the future, funding from the LCA program should be provided to NMFS, EPA, USF&WS and USGS personnel working directly on these projects. If funding does not come from the LCA budget, then these resource agencies may have to support the program from their own limited budgets. Without additional funding, these agencies could be forced to drop the work on other worthwhile projects resulting on an adverse impact on the environment. Please address this issue in the FPEIS.

AUBN 04

Contaminated Sediments:

During the scoping hearing in Belle Chase we asked that the Corps consider sediment and water quality issues in the DPEIS. We recommended that, "Sediment and water used for LCA projects must meet state and federal standards. Chemical analyses of sediments should be compared to the National Oceanic & Atmospheric Administration (NOAA) sediment standards for benthic organisms to safeguard public health and the environment. Appropriate testing and monitoring of water and sediment quality must be completed prior to construction or implementation of any project."

Our comments have not been addressed in the DPEIS. We have observed that there is a continued reluctance to address the issues of contaminated dredged sediments because this would complicate the Corps' responsibilities. At every opportunity, the New Orleans District has avoided addressing the environmental affects of dredging and disposal of contaminated sediments. There is an appearance of a conflict of interest. It was even stated in the DPEIS that any dredged material and sediments beneath navigable waters proposed for dredging are not included under Initial Site Assessment (ISA), (DPEIS, 2004, sec. 3.22). The Inland Testing Manual (ITM), Chpt. 7, (USACE & USEPA, 1998) was cited as a source for this position but after reviewing Chpt. 7 of the ITM there is no guidance that contaminated sediments beneath navigable waters proposed for dredging are not regulated.

How will the Corps assess the potentially contaminated sediments which will be used to construct restoration projects if they are beneath navigable waters? Will the Corps use the NOAA sediment quality guidelines (SQGs) to screen for contaminated sediments as we suggested? The Audubon Council, along with nine additional organizations, has asked the Corps to consider the NOAA guidelines as part of sediment quality analysis. The DPEIS is silent on this issue. We request that it be discussed in the FPEIS.

The Draft Programmatic EIS is silent on how the USACE plans to handle sediments potentially contaminated with pesticides or heavy metals to be used in CWPPRA or LCA projects. How does the Corps plan to avoid dredging or distributing sediments for open water disposal that may be toxic to the environment?

Since there are no Corps or EPA standards for determining the levels of sediment contamination which could adversely affect the environment, we suggested that NOAA acute effects standards (the ER-L and ER-M) be used as a screening tool. These can be used initially

AUBN 03: The USACE has been funding the collocated team members of the PDT for the present effort. The USACE's cost estimates for each near-term restoration feature of the LCA Plan includes funds for active participation by other Federal agencies.

AUBN 04: The Clean Water Act 404 (b)(1) Guidelines (40 CFR 230) are the environmental criteria followed by the USACE for evaluating the proposed discharges of dredged or fill material into waters of the United States. Compliance with these guidelines is the controlling factor used by the USACE to determine the environmental acceptability of disposal alternatives. The USACE must demonstrate through completion of a 404 (b)(1) evaluation that any proposed discharge of dredged material is in compliance with the guidelines. On 30 November 1998, the EPA excluded dredged material as a hazardous waste (Federal Register Vol 63, No. 229). Specifically, 40 CFR 261.4 of that rule provides that dredged material regulated under "a permit that has been issued under Section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344) or Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413) is not a hazardous waste." The appropriate section(s) have been revised accordingly. For additional information, please see responses to GRN 04, GRN 05, GRN 07, and GRN 08. Also see General Response #12 regarding hazardous substances in Beneficial Use materials.

Letter 35: Dr. Barry Kohl, Louisiana Audubon Council (AUBN)

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to determine whether the sediment toxicity could cause adverse environmental affects to benthic organisms. We suggested at Belle Chase and at other meetings, that these thresholds should be used as indicators. If chemical analyses of sediments for Contaminants of Concern (COCs) show that the ER-M for a chemical is met or exceeded, then other bioassay tests should to be performed (following the ITM protocols) before the sediments are used for restoration projects.

The only citation we could find about contaminated sediments appears Section 3.22 of the DPEIS entitled Hazardous, Toxic, and Radioactive Waste (HTRW). It states that, "HTRW does not include dredged material and sediments beneath navigable waters proposed for dredging." The message that is conveyed to the reader is that contaminated sediments beneath navigable waters are excluded from regulation. This should be clarified in the FPEIS.

The DPEIS states that, "due to the large number of sites of concern within the LCA area, compilation of a list of sites of concern for the entire LCA study area is not practicable." (DPEIS sec. 3.22.2). Why not? This statement implies that the Corps does not intend to compile (inventory) the locations of known or probable sites which have contaminated sediments or soils. This needs to be explained in the FPEIS.

Why is it not practicable? Is this because of a lack of funding or a choice the Corps has made not to pursue this information? The Corps reports (Sec. 3.22.2) that there have been "incidents involving oil and chemical spills, abandoned sites, landfills and leaking underground storage tanks." Many of these known occurrences will have contaminated soils and aquatic sediments. Pockets of contamination could be spread over a wide area during individual LCA project construction unless the sediments are tested for toxic chemicals first. Address this issue in the FPEIS.

Screening with Sediment Quality Guidelines (SQGs):

According to the Memorandum signed by Major General Russell L. Fuhrman, Director of Civil Works, (Oct. 1998), entitled; Use of Sediment Quality Guidelines (SQGs) in dredged Material Management Decision Making, he states:

"As mandated under the Section 404 of the Clean Water Act (CWA) and Section 102 of the Marine Protection Research and Sanctuaries Act (MPRSA), the Corps is required to employ an effects-based testing protocol when dredged material is proposed for open water placement, or those instances when placement is an upland environment resulting in effluent discharge through a weir back into waters of the United States." (USACE, 1998a)

The screening of sediments to be dredged should be a standard operating procedure for an environmental projects as extensive as the LCA. Reconnaissance sampling of sediments for each area to be dredged would provide the information needed to determine whether further examination of the area is warranted. If a common sense approach is used, it would not be an expensive procedure. If a Tier 1 evaluation shows a "reason to believe" that there may be a contamination problem, then the NOAA screening standards could be used to determine whether a Tier 2 review is necessary. If the ER-M is met or exceeded then there is a "reason to believe" that the sediments have acute toxicity, then additional bioassays would be necessary (USACE, 1998a).

We request that the contaminated sediment section (Sec. 3.22) be expanded in the FPEIS to state what policy is to be followed to assure that dredging and sediment dispersal during LCA approved projects will not further contaminate the environment.

AUBN 04 (Continued)

AUBN 05

Diversion Projects:

We request that a priority status be given to the two existing fresh water diversion projects to modify them as sediment diversions. The Caernarvon diversion (Subprovince 1) and

AUBN 05: Comment noted. As envisioned in the LCA Plan, modification to the operation of Davis Pond and Caernarvon structures would include operating the structures so that ecosystem restoration, including wetland creation via increased sediments and nutrients would be the project purposes.

Letter 35: Dr. Barry Kohl, Louisiana Audubon Council (AUBN)

AUBN 05 (Continued)

Davis Pond diversion (Subprovince 2) are already in operation. It is noted in the Main Report (Table MR-25b) that the Corps is seeking re-authorization to optimize these two projects for marsh creation. We support this recommendation and ask that these projects be moved to a high priority to receive re-authorization as soon as possible. Modification and conversion of the existing Caernarvon and Davis Pond water diversions to sediment diversions, in conjunction with an active environmental monitoring program, could assist in planning and design of other sediment diversion projects recommended in the LCA plan.

Consistency and Coordination:

AUBN 06

We recommend that Figure MR-45 of the Main Report include another box which would include *State Transportation and Infrastructure Projects* which should also be reviewed for Consistency Coordination with the LCA Program. State Highway projects should be included in any review and scrutinized for consistency and compatibility with the goals of LCA.

Monitoring Program:

AUBN 07

We agree with the statement of Main Report, Sec. 4.8.4, regarding Monitoring and Adaptive Management that monetary constraints on projects should be lifted to allow the collection of scientific/engineering data over short and long term for individual projects. Monitoring will provide essential scientific data to assess the impacts of LCA projects before and after construction.

Preconstruction monitoring is very important also. Unless there is a baseline of scientific information gathered for each LCA project the success of the coastal restoration project will be more difficult to evaluate. We request that types of monitoring be discussed in the FPEIS and which agencies have the responsibilities for collection and analyzing the data. Also, add a list of parameters to be measured as part of the baseline monitoring, preconstruction parameters and post-construction parameters . Also a short monitoring strategy section should be added to the FPEIS. This is information which would be helpful in evaluating the type of data to be collected.

Corrections:

AUBN 08

Page DPEIS 4-80. Second para., fourth sentence; "absorb" should be changed to "adsorb" since the hydrophobic substances would attach to the surface of fine-grained sediment particles.

AUBN 09

Also in same paragraph. It is speculation to say that concentrations of [contaminants of concern] would not be "sufficient to exceed alert levels, or harm the environment." There is a likelihood that some concentrations of toxic chemicals could exceed NOAA's ER-L or ER-M and cause adverse effects to benthic organisms. Without monitoring data the statement attributed to the USGS is pure speculation.

AUBN 10

In conclusion, the Audubon Council believes that sediment diversions should be given the highest priority as well as demonstration projects which would provide the science and engineering modeling necessary to design successful sediment conveyances. We request that this letter be made part of the FPEIS and that responses to the issues raised above be addressed in the FPEIS to be sent out for public review.

Sincerely,

Barry Kohl

Dr. Barry Kohl
President

AUBN 06: Comment noted. The figure has been revised to include state programs in general.

AUBN 07: The intent of proposing the specific authorization of an S&T Program is the involvement of a broad spectrum of appropriate scientific disciplines to enable that mechanism to establish appropriate protocols, requirements, and tools for plan implementation. The S&T Program, once formed, will be responsible for establishing, in concert with the CRMS, key monitoring stations to collect baseline data, and identifying key uncertainties on which to focus monitoring and assessment activities. As stated in Appendix A of the LCA Plan, data collection as well as monitoring and assessment efforts will require collaboration and funding support from many federal and state agencies, NGOs, and universities. It would be premature to specify requirements for data collection prior to receiving authorization guidance for the requested S&T program. The appropriate section(s) have been revised accordingly.

AUBN 08: Concur. “Absorb” will be replaced with “adsorb.” Comment noted. The appropriate section(s) have been revised accordingly.

AUBN 09: The sentence will be replaced with the following: “As mandated by Section 404(b)(1) of the Clean Water Act, the USACE is required to demonstrate that the reintroduction of sediments into a proposed study area will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern.”

AUBN 10: Comments noted.

Letter 35: Dr. Barry Kohl, Louisiana Audubon Council (AUBN)

attachment:

cc: Mark Davis, Coalition to Restore Coastal LA
Delta Chapter of Sierra Club
Gulf Restoration Network (GRN)
Lake Pontchartrain Basin Foundation (LPBF)
Miss. River Basin Alliance (MRBA)
Environ. Protection Agency
Nat'l Marine Fisheries Service
US Fish & Wildlife Service
Dept. of Natural Resources
LA Dept. Environ. Quality

References:

Conner, Col. W., 1999. Program update (Carrollton Gage), *in* Riverside, a Newsletter published by the New Orleans District Army Corps of Engineers, New Orleans District, v. 10, no. 2, p. 2.

USACE, 1998a. Memorandum for Commanders, Major Subordinate Commands. Subject: Use of Sediment Quality Guidelines (SQGs) in dredged Material Management Decision Making. Signed by Major General Russell L. Furman, Director of Civil Works, Dept. of the Army, Washington, DC., Oct. 28, 1998.

USACE, 1998b. Use of Sediment Quality Guidelines (SQGs) in dredged Material Management. Dredging Research Technical Note. EEDP-04-29, May 1998, 14 pp.

USEPA and USACE, 1998. Evaluation of Dredged Material Proposed for Discharge in Waters of the US-Testing Manual; Inland Testing Manual, EPA-823-B-94-002, Office of Water, 172 pp.

Letter 35: Dr. Barry Kohl, Louisiana Audubon Council (AUBN)

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Commander
Col. William Conner

Chief, Public Affairs
Jim Addison

Editor
Lira B. Frye

Contributing Writers
John Hall
Candace N. Hull

Graphic Design
Nancy Mayberry,
Elena Napolitano,
Anne Marino

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On Our Cover:
The Auxiliary Structure works together with the Low Sill Structure to maintain a 70-30 flow distribution between the Mississippi and Atchafalaya rivers, respectively.
Photo by Nat Montalbano

Carrollton Gage

Col. Bill Conner

Program update

Thought you might be interested in reading about the current status of our many programs. We often talk about specific projects or policy initiatives like restructuring, but lately I haven't heard much discussion relative to the key programs that make up what we do here.

Our **General Investigation (GI)** program remains healthy. With over $4 million available we will continue big-ticket studies like our locks on the intracoastal waterway and hurricane protection and/or floodproofing in Lafayette, Jefferson and Orleans parishes.

Construction General (CG) shows a FY99 balance of $105 million. In that figure there is good news and bad news. The bad news is that next year we shouldn't expect large congressional additions to the president's budget due to Congressman Livingston's departure from the House. The good news is the Corps' overall CG account shows a surplus for this year and a possible surplus for next year. We are looking to harvest as much of that surplus as you folks can possibly expend.

As always, the **Operations & Maintenance General (O&M GEN)** program is the toughest to wrap your arms around. Our congressional allowance for FY99 is "only" around $110 million. That's a huge amount for most districts, but historically, in New Orleans, we spend between $125 and $200 million annually under O&M GEN authority. That's because the headquarters always keeps extra O&M GEN money in DC as contingency against natural disasters. In addition, Congress will often appropriate additional funds in the spring for disaster relief. So we rarely finish any given year with an O&M GEN balance sheet that looks anything like what we started the year with.

This year will be no exception. Our MRGO cleanup expenses have already exceeded what we planned to spend for the entire year.

Our **Regulatory Program** and **CWPPRA Program** remain steady, but severely underfunded. Regulatory is deliberately underfunded each year as part of the grand game of give and take between private interests and public oversight. That won't change in the near future. CWPPRA looks good on paper, with funds available for all Corps projects, but in reality the state struggles daily to find funds to match our federal dollars. District employees who work these two programs have some of the most demanding jobs in the Corps.

Two lesser known programs are the **Planning Assistance to the States (PAS)** and **Continuing Authorities Programs (CAP).** These programs are centrally funded and bring several million dollars to Louisiana each year. But more important, they give the district great flexibility to touch many areas of interest at the parish and city level.

Finally, we come to the **Mississippi River and Tributaries Program (MR&T).** Our MR&T allowance is just over $100 million this year, which is obviously a big number but not nearly as much as we would like. We will continue to study the Mississippi and Atchafalaya river valleys under MR&T, and press hard on MR&T construction work at Davis Pond and on levee raising.

In conclusion, the next time someone asks you what you do for a living, you can hand over this column.

Enjoy the month

With Mardi Gras, Black History Month, and National Engineers Week all happening in February, this short month promises to be long on activities. You are encouraged to partake of as much New Orleans hospitality as you can handle, but please do so with care. We need you back in one piece for March.

Essayons

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Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

KATHLEEN BABINEAUX BLANCO
GOVERNOR

State of Louisiana
OFFICE OF THE GOVERNOR
Baton Rouge
70804-9004

POST OFFICE BOX 94004
(225) 342-7015

August 23, 2004

U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, LA 70160

Attn. Mr. Timothy Axtman
Project Manager

The Louisiana Coastal Wetlands Conservation and Restoration Authority (Authority) held a special meeting on August 17, 2004 to discuss the Draft Louisiana Coastal Area Ecosystem Restoration Study (LCA Plan) and finalize comments on the LCA Plan. During this meeting, the Authority unanimously approved the following comments on the LCA Plan:

The Louisiana Coastal Wetlands Conservation and Restoration Authority supports the Draft LCA Plan put forth by the U.S. Army Corps of Engineers. We appreciate the acknowledgement of the national scope of Louisiana's coastal land loss problems and the numerous Federal agencies' efforts in developing this Plan for addressing the problem. We would like to reinforce the following points:

LCWCRA 01

- The Authority supports the LCA Plan as a near-term approach that addresses some of the most critical needs of the Louisiana coastal area and serves as the first phase of implementation. The State of Louisiana must still develop and implement a comprehensive strategy for addressing coastal land loss, whether within or independent of the proposed LCA Program.

LCWCRA 02

- The LCA Plan should describe the way in which Program Management will work with affected industries, local government entities and state agencies to minimize the potential for unnecessary conflicts and to minimize negative impacts of LCA Plan implementation on those entities and the infrastructure they operate. Examples of this infrastructure include, but are not limited to, oil and gas wellheads, pipelines and terminals, locks and other navigational structures, hurricane protection and flood control levees, State parks and conservation areas, and roads and bridges. Not only must the Plan consider the existence and safety of this infrastructure, but also the maintenance and operations costs associated with it.

LCWCRA 03

- In prioritizing project selection and plan implementation, the LCA Program should recognize and consider the importance of habitat diversity for maintaining viable and

LCWCRA 01: Comment noted.

LCWCRA 02: Section 4 of the Main Report provides a description of how the LCA Plan will maintain consistency with other activities in the Louisiana coastal area. Included as a point of contact in this consistency effort is the Louisiana Wetlands Conservation and Restoration Authority, which, with its broad state agency membership, should be able to recognize potential conflicts and minimize the negative impacts of LCA Plan activities on other coastal activities. Additional discussion regarding the coordination of the USACE and the local cost-share sponsor with affected industries, local government entities and state agencies will be discussed in greater detail in the Master Program Management Plan, which will be developed following Congressional approval of the LCA Plan.

LCWCRA 03: The LCA Plan planning objectives and the parameters developed for assessing restoration plan performance were specifically developed around the incorporation of wetland quantity, and biologic and system diversity. For in the initial analyses, the specific ecologic outputs were quantified, and their relative weights determined to produce a composite output value appropriate to capture the plan effectiveness in addressing the multiple planning objectives. Additionally, the critical needs criteria were identified as a more directly and qualitatively assessable subset of the study planning objectives. As a result it is believed that the identified LCA Plan features represent an effective means of meeting those objectives.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

LCWCRA 03 (Continued)

sustainable populations of coastal species. These valuable resources, both aquatic and terrestrial, are driven by the productivity of Louisiana's estuaries, systems that have salinity gradients in both space and time.

- There are two related coastal water quality issues that should be addressed in more detail in the LCA report; hypoxia in the Gulf of Mexico and water quality in the Mississippi River. Low dissolved oxygen, or hypoxia, in the Gulf of Mexico is caused by nutrients from the upper Mississippi River watershed, along with separation of the Mississippi River from its floodplain. The State of Louisiana supports the use of Mississippi River diversions to reintroduce river water, along with its excess nutrients, into our eroding wetlands, addressing coastal erosion, hypoxia, and water quality. Although the draft LCA report does mention these water quality issues, they warrant more detailed analysis

LCWCRA 04

LCWCRA 05

- The LCA Plan should be science and technology driven. It should ensure a Science and Technology Program that has a strong voice in the direction of the Program, working closely with the Program Management and Program Execution Teams to ensure use of the best, most current science in restoring Louisiana's coastal area.

In addition to these comments, individual agency members of the Authority provided comments specific to their respective areas of interest. On behalf of the Authority, I submit these comments, both those above and those attached, as the official comments of the Louisiana Coastal Wetlands Conservation and Restoration Authority.

Sincerely,

Sidney Coffee, Chair
Louisiana Coastal Wetlands Conservation and Restoration Authority

Enclosures

cc: Jerry Luke LeBlanc, Division of Administration
Dwight Landreneau, Department of Wildlife and Fisheries
Greg Linscombe, Department of Wildlife and Fisheries
Scott Angell, Department of Natural Resources
Randy Hanchey, Department of Natural Resources
Mike McDaniel, Department of Environmental Quality
Karen Gautreaux, Department of Environmental Quality
Bradley Spicer, Department of Agriculture and Forestry
Butch Stegall, Department of Agriculture and Forestry
Johnny B. Bradberry, Department of Transportation and Development
Ed Preau, Department of Transportation and Development
Whitney Ledet, Department of Transportation and Development
Larry Ardoin, Department of Transportation and Development

LCWCRA 04: Further detail and analysis of water quality in the Mississippi River and the effects of river reintroduction projects on hypoxia in the Gulf of Mexico will be provided, as appropriate, in the subsequent project-specific NEPA documents for each restoration measure. The LCA Main Report does discuss the reduction of nutrient delivery to the Gulf of Mexico as a LCA Plan objective, and accordingly, provides for an initial evaluation of the alternatives' performances in reducing nitrogen.

LCWCRA 05: Comment noted. Appendix A, the S&T Program, describes the mechanisms to be put in place to ensure that the LCA Plan is supported by the best available science. It also discusses the framework for interaction between the Science Board and Program Management and the Program Execution Team. Section 4 of the Main Report has also been revised for greater clarity in this regard.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

Comments of the
Louisiana Department of Wildlife and Fisheries

Partnerships

We still believe a comprehensive plan, based on the Coast 2050 Plan, is the best way to plan for future coastal restoration activities. Our coast is so dynamic and the ecological and economic interactions are so complex that a comprehensive plan is needed to balance the needs and take in to account the consequences of individual restoration projects. We urge the U.S. Army Corps of Engineers (USACE) to incorporate a comprehensive approach in the long-term planning component of this study. LCWCRA 06

LCWCRA 07 The projects proposed in the study are part of a suite of proposals and plans in and adjacent to the coastal zone in Louisiana. They affect sediment and water delivery, drainage, management for particular suites of species, etc. Examples include the Atchafalaya Basin Program, various parish and regional drainage districts and levee boards, and the Statewide Water Management efforts. The LCA plan must link all these efforts, and coordinate activities to provide the best outcome.

In Louisiana, as in the rest of the nation, coastal parishes are the fastest growing areas. Consistency between management and regulation of coastal development and coastal restoration efforts is critical. It is important that not only are permit applications reviewed for their potential effects on existing or planned Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) projects or LCA projects, but also for their consistency with state and federal coastal restoration goals. This is the function of the state's Coastal Management Plan. The LCA study and Programmatic Environmental Impact Statement address the need for better coordination between restoration and regulatory efforts, but we want to emphasize how critical coordination is to this effort.

In addition, the LCA Plan should address social and economic impacts, positive and negative, to coastal communities. Changes to fish and wildlife communities will cause displacement and stress for communities with economies dependent upon these resources. Changes in coastal morphology may exacerbate flooding and infrastructure problems. The plan should address the impacts, and the means required to alleviate any negative impacts. LCWCRA 08

LCWCRA 09 Just as all coastal communities have a stake in the outcome of state and federal efforts to rehabilitate the coast, industries such as oil and gas, agriculture, commercial and recreational fishing and tourism also have an important stake. We urge the USACE to explore opportunities for public-private cooperation in planning and funding these important projects.

LCWCRA 06: The FY05 budget guidance directs the identification of near-term restoration plan (10 years or so) and the initiation of large-scale studies of long-term concepts to identify long-range restoration actions. The magnitude and spatial scale of the long-term concepts proposed for study in the TSP result in the consideration of long-range effects over the entire coastal area. The ultimate documentation of the findings of these studies, as well as the specified review of the LCA plan at five year intervals, provides a basis for revision and submission of parts or all of the plan for additional or modified of authorization by Congress. As provided for in the LCA Plan this process allows the development and adoption of a comprehensive restoration plan over time.

LCWCRA 07: Comment noted. The USACE agrees that coordination of restoration efforts with regulatory efforts is a necessary step to ensure the success of restoration efforts throughout the coastal zone. Section 6 of the FPEIS provides more details in this regard.

LCWCRA 08: Potential socioeconomic impacts are discussed in Section 4 of the FPEIS. Additional details regarding these impacts will be identified and evaluated during follow-up feasibility level analyses of specific features, which would include NEPA documentation on a project-specific basis.

LCWCRA 09: All workable sources of funding will be considered jointly by the Federal and local cost-sharing partners. The State of Louisiana as the principal local sponsor for the LCA Plan restoration efforts is in the best position to capitalize on vested local interest in restoration and leveraging of any private funds that could be applied to this effort.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

Wildlife/ Fish Habitats

The LCA Near-Term study identifies Ecosystem Planning Objective #1 as sustaining productive and diverse fish and wildlife habitats. The Louisiana Department of Wildlife and Fisheries' trust resources include all the state's wildlife, including alligators, coastal furbearers, fish and shellfish, and game and non-game species. This agency actively manages over 630,000 coastal wetland acres in refuges and coastal wildlife management areas and over 2,000,000 acres of public oyster grounds. We lease another 398,000 acres of state water bottoms for oyster cultivation. The Department wants to work closely with the USACE and state and federal coastal restoration managers on coast-wide restoration efforts. LCWCRA 10

The LCA Near-Term Plan acknowledges the importance of sustainable fisheries and the habitats that support them. The LCA plan specifically recognizes the trade-off between fish and shellfish species requiring more saline conditions and those preferring fresher conditions. Maintenance of salinity gradients is critical to maintaining viable and productive fisheries as the plan's authors recognize in the first Hydrogeomorphic objective. We believe it's possible to plan for areas with sustainable estuarine fisheries by imitating natural seasonal flows and manipulating deltaic deposition. We urge the USACE to include maintenance of salinity gradients in developing models and basin-level plans. LCWCRA 11

In addition, maintaining and /or establishing coastal land bridges is critical to protect Louisiana's remaining wetlands. Maintaining land bridges can also help keep interior lake margins from deteriorating and exacerbating erosion in adjacent marshes. Retaining structural landscape components helps curtail the saltwater intrusion that threatens habitat for coastal species including bald eagles, alligators and waterfowl. We urge the USACE to include a critical look at coastal land bridges as part of the planning process. LCWCRA 12

LCWCRA 13 Maintenance and rehabilitation of barrier islands, another important structural landscape component, can reduce storm surge from hurricanes and tropical storms, and provide essential habitat for shorebirds, wading birds, waterbirds, seabirds and estuarine fish. These are frequently big expensive projects, and we urge the USACE to consider them as part of a comprehensive plan rather than a stand-alone project.

We strongly agree with programmatic authorization for modifications to existing water control structures and the beneficial use of dredged materials. Both of these are practical measures that can and should be funded and implemented in the near term. We believe that the USACE should consider funding sources for repair and maintenance of publicly owned and operated structures provided those structures can be operated in a way that would enhance coastal rehabilitation efforts. The USACE should also consider whether the requested authorization costs are really sufficient to cover the need. LCWCRA 14

LCWCRA 15 Any of the project components listed in the LCA should include a monitoring plan to measure the effectiveness of the project. Plan objectives include sustaining productivity and diversity of fish and wildlife habitat and resources. Clearly, scientific reviewers and

LCWCRA 10: Comment noted. The USACE encourages all state agencies to coordinate with Federal and state restoration managers on coast wide restoration efforts.

LCWCRA 11: Concur. Establishment of dynamic salinity gradients that reflect natural cycles of fresh water availability and marine forcing is a hydrogeomorphic planning objective, as stated in the Main Report, Section 3. Future analyses of projects will include alternative operational plans to evaluate these issues.

LCWCRA 12: The potential to restore or maintain critical geomorphic structure, i.e., land bridges, was both a planning objective and one of the stated critical need criteria. There were several land bridge restoration features considered for the near-term plan. Some of these features involved some uncertainty in the source, delivery, or placement of material, or a combination of these factors. At least one land bridge restoration feature did pass the sorting criteria and was assessed to be critical enough for inclusion in the LCA Plan. This project is entitled "Maintain Land Bridge Between Caillou Lake and Gulf of Mexico." Additionally, several demonstration projects will contribute to planning and design of future land bridge projects. Restoration and preservation of geomorphic coastal structures will continue to be a primary objective of restoration planning.

LCWCRA 13: While the USACE agrees that the maintenance and rehabilitation of barrier islands is an integral component of a comprehensive restoration approach, the restoration feature in the LCA Plan focused on those parts of the barrier shoreline that were most threatened with loss (i.e., the most critical), and those reaches that did not already have some type of ongoing restoration effort under other programs. All geomorphic components of the barrier island shorelines need some measure of restoration as part of a comprehensive solution for the area, and implementation of projects to achieve restoration, whether they were funded by CWPPRA or any other source, would complement efforts undertaken by the LCA Program.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

LCWCRA 13 (Continued): Verbiage has been added to the LCA Plan project description for barrier island restoration to clarify the critical nature of the entire coastal barrier island system, as well as verbiage regarding the rationale for identification of the shoreline reaches to be initially addressed within the LCA Plan in Section 3 of the Main Report.

LCWCRA 14: It is intended that the programmatic effort to utilize existing water control structures will include non-Federal as well as Federal structures. At this time the extent of this effort is limited to the identification and study of existing structures and possible modifications. For these purposes, the funding levels currently proposed should be adequate. If the initial efforts of this program prove successful, then additional, and potentially increased, funding would be an element of future LCA Plan updates or amendments.

LCWCRA 15: Monitoring is an essential component of Adaptive Management, and each restoration feature and component of the LCA Plan would have monitoring associated with its implementation. Monitoring and the collection of baseline data is a part of the S&T Program, and each will require the participation of the state, academia, and Federal agencies.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

LCWCRA 15 (Continued)

coastal resource manages will need baseline data so they can quantify the success for the individual projects. The USACE needs to ensure that pre-project monitoring funds are included in the appropriate authorization categories. It isn't clear from the Plan's discussion of the Science and Technology program whether monitoring would be part of the S&T program. We suggest that in either case, scientific initiatives pursued under the S&T program must be designed to answer the needs of the resource managers and coastal planners. In addition, we suggest that the Department is the state entity best qualified to collect and interpret baseline data regarding diversity and productivity of fish and wildlife habitat.

PROJECT SPECIFIC COMMENTS

LCWCRA 16

The range of project areas of impact is very broad. The study finds that small diversions into the Maurepas swamp and Bayou Lafourche are as critical as rebuilding large portions of the Barataria shoreline and reintroducing water from the Atchafalaya into northern Terrebonne marshes. The smaller projects are good projects, and the USACE may be able to implement them in less than 10 years, but they may not meet the "critical" standard. Some of the 2050 projects that were designated as critical were not addressed in this study. This discrepancy re-emphasizes the need for a framework concept, *i.e.,* a comprehensive plan.

Subprovince 1

LCWCRA 17

- The extensive cypress tupelo swamps of the Maurepas basin, and the freshwater fisheries including the Blind and Amite Rivers will benefit from the introduction of fresh water through small diversions. Gapping the banks of the Amite will also benefit adjacent swamps. Although we recognize that these are small pieces of the rehabilitation efforts in the deltaic plain, we support these projects as part of a comprehensive program for this subprovince.

LCWCRA 18

- The "Mississippi River Delta Management Study" was removed from consideration in the sorting process because the Project Development Team found that the USACE would not be able to implement it within 5-10 years. It is not clear why some components of this project could not be started in 10 years.

Subprovinces 1 and 2

LCWCRA 19

- Sediment delivery via pipeline seems to be in practice during routine maintenance dredging to distances of at least 30,000 feet. The USACE removed projects involving sediment delivery via pipelines from Bayou La Branche south to Quarantine Bay because of significant uncertainties regarding this technique. The USACE also removed sediment delivery via pipeline at Bastian Bay/Buras, at Empire and at Main Pass for this reason. In the discussion of the sorting process, the study report authors should clarify what these significant uncertainties are. Use of material at Head of Passes would seem to be very significant for marsh creation instead of placement back in Southwest Pass to be lost from the system.

LCWCRA 16: Each of the restoration features that were identified in the LCA Plan was critical to meet the critical needs criteria developed for this study. No inclusion of projects to implement some of the Coast 2050 strategies does not imply that they are not critical in the larger context of coastal restoration. In fact, they may be addressed more expeditiously under other program authorities (e.g., CWPPRA) or in subsequent LCA Plan authorizations.

LCWCRA 17: Comment noted. These projects are included as part of the selected plan.

LCWCRA 18: Certain potential components of the Mississippi River Delta Management Plan were evaluated and failed to pass sorting criteria number 3 (independence of implementation). Implementation of such large river diversions would potentially have large impacts on navigation, flood control, fisheries, and water supply, and may limit future potential actions. For these reasons, it was determined that a more comprehensive review of the Mississippi River Delta was a more appropriate strategy for addressing ecosystem needs in this area, and this pushed these actions beyond a ten-year implementation window. Initiation of this study is a critical action in the near-term.

LCWCRA 19: While it is well established that long-distance pipeline transport of sediment is feasible, uncertainties in these measures are related more to the sources of sediments and their ultimate distribution once transported from the borrow site to the project area. For example, what is the most efficient method of applying thin layers of sediment over vast expanses of degrading marshes without damaging existing functional marsh in the project area? The Bayou LeBranche area was specifically removed because of significant uncertainties related to conflicting landowner desires for the area. Significant uncertainties regarding these specific restoration measures have been clarified in the Main Report, Section 4 and in Appendix A.

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- Caernarvon/Davis Pond: A constant discharge into the outfall areas of these projects would lead to more stable freshwater fisheries for both recreational and commercial fishers. Bass fishing has been one of the successes of the Caernarvon diversion. Per our comments on sustainable fisheries, through manipulation of water flow and delta-building activities we need to maintain salinity gradients to maintain productive fisheries. The USACE should implement studies of the changes to freshwater fisheries resulting from these freshwater diversion projects, and use the results to plan authorization and operational changes. LCWCRA 20

Subprovince 3

- We find that the benefits of the diversion into Bayou Lafourche will be small due to the proposed low flow rate and distance of the diversion from coastal areas. Most if not all the benefits would be to the water quality in Bayou Lafourche. LCWCRA 21
- In Subprovince 3 two projects appeared to have great potential- Back Fill of Pipeline Canals and Freshwater Introduction South of Lake DeCade. These general types of projects, back filling or plugging pipeline canals and freshwater introductions are fairly routine. LCWCRA 22
- We feel that one project in the "Future Authorization", the *Acadiana Bay Estuarine Restoration Study*, conflicts with the LCA planning objectives. On the surface, its intent seems to be minimizing the amount of sediment deposited by the Atchafalaya River and the Wax Lake Outlet, and reducing the effects of the introduction of fresh water at the mouths of these water bodies. LCWCRA 23

Subprovince 4

- Shoreline erosion in subprovince four is a critical issue. For example, retreat at Rockefeller Refuge is occurring at a rate of approximately 37 feet per year. The 39.1 mile shoreline area east of the Mermentau River has retreated at a rate of 28.5 ft./yr. from 1883 to 1994 (Byrnes, M.R., R.A. McBride, Q. Tao, and L. Duvic. 1995. Historical shoreline dynamics along the Chenier Plain of southwestern Louisiana. Gulf Coast Association of Geological Societies Transactions. Vol. XLV. P. 113-122.). Approximately 110,000 wetland acres from Rollover Bayou, west to the Mermentau River, and north to State Highway 82 will be negatively impacted without some form of shoreline protection. The Gulf of Mexico shoreline retreat in recent years has damaged State Highway 82 from the west end of Holly Beach to Johnson Bayou, and threatens approximately 320,000 wetland acres north of Highway 82 to the Intracoastal Canal and west of Highway 27 to the Sabine River. Shoreline protection in this area is a critical need that should be addressed in the near term plan. LCWCRA 24
- Per a similar comment in subprovince one, all five projects associated with the "Chenier Plain Freshwater Management and Allocation Reassessment" were removed because the Project Development Team thought they could be implemented within 5- LCWCRA 25

LCWCRA 20: Comment noted. The S&T Program provides an avenue for such monitoring and research, which should ultimately lead to more efficient projects. It should be noted, however, that "constant discharge" may not be possible due to constraints with the structure design and river stages relative to outfall area water levels, and may conflict with hydrogeomorphic planning objective #1, establishment of dynamic salinity gradients which reflect the natural availability of freshwater and marine forcing. These issues will be further evaluated in specific decision documents related to modification of existing structures, as well as for new projects.

LCWCRA 21: Section 4 of the Main Report has been modified to include more detailed descriptions of the Near-Term Critical Restoration Features, including a more detailed description of the critical need for the Bayou Lafourche project, the anticipated benefits, and the project's contribution to the overall strategy for restoration of coastal Louisiana.

LCWCRA 22: Comment noted.

LCWCRA 23: The Acadiana Bays estuary has experienced increased freshening and turbidity since the 1930s, and as a result, submerged aquatic vegetation densities and estuarine fisheries have declined. In addition, historic reefs, largely destroyed by dredging, no longer provide a physical barrier to fresh waster exchange. The primary goal of the Acadiana Bays study is to evaluate the reestablishment of historic water quality conditions and viable estuarine fisheries in the system while maintaining a growing delta to the east. This large-scale study will utilize and extend existing state supported hydrodynamic models to ultimately determine a solution for the restoration and maintenance of this estuarine system. While this study is not consistent with all LCA planning objectives, it is consistent with the objectives of establishing a dynamic salinity gradient and reestablishing natural landscape features (historic reef) critical to ecosystem structure and function. Strong public support for this project warrants its investigation as a long-term study.

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LCWCRA 24: Shoreline protection is included as a demonstration project in this critical area. Once appropriate and efficient technology is identified, further implementation is possible through subsequent LCA Program authorization or under other program authorities, such as CWPPRA. In addition, it may be possible to enhance or mimic natural Chenier Plain processes to reverse shoreline retreat in this area, and this will also be evaluated as a component of the Chenier Plain Fresh Water and Sediment Assessment and Reallocation Study.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

LCWCRA 25: Although it is possible that certain of the potential restoration measures could be implemented in the near-term time frame, these measures did not meet sorting criteria 2 (sufficient S&T understanding) and/or sorting criteria 3 (independence of implementation). Because of these uncertainties, and specific comments made by the NTRC, it is recommended that the Chenier Plain Fresh Water and Sediment Assessment and Reallocation Study be performed before making definitive statements concerning which projects should be implemented under the LCA Plan authorization.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

LCWCRA 25 (Continued)

10 years. It is not clear why some of these projects could not have had construction started in 10 years. Salinity intrusion continues to be a major issue in this part of the coast, and should be addressed.

Corrections:

LCWCRA 26

- Oyster Leasing Section 4.7.13

"For oyster leases located within the projected impact area of a coastal restoration plan, at the end of its current lease term, a lease may be renewed for a full 15 years, La. R.S. 56:428, a term between 1 and 14 years, La. R.S. 56: 428.1, or on an annual basis, La. R.S. 56: 428.2." This statement is incorrect. Expiring leases located within the projected impact area of a coastal restoration plan may be renewed only under La. R.S. 56: 428.1 for a term of 1 to 14 years. Leases within the impact area of an operational project may be renewed under La. R.S. 56: 428.2 only for a one-year period provided the leaseholder stipulates that the waterbottoms under lease are capable of producing oysters. Leases may be renewed under La. R.S. 56: 428 for a 15-year term only when they are not in either a projected impact area or operational area of a coastal restoration project.

Further in paragraph 2, page MR-211, "As such, the state must acquire existing oyster leases, including operational and bobtail leases anticipated to be adversely impacted by a project, and the state must not enter into any new oyster leases or operational or bobtail leases within oyster impact areas." We suggest deleting this sentence because it is misleading and confusing. The purpose for issuing operational and projected impact area leases (bobtail) is to free the waterbottoms contained in the lease for use in coastal restoration. Thus, the term of projected impact area leases is set to coincide with the projected beginning of construction of the coastal restoration project. The one-year term of operational leases is intended to allow the state to terminate the lease should the impacts of the operational project render the waterbottoms incapable of supporting oysters. In either case, acquiring the leases in the sense of buying them would not be necessary.

LCWCRA 26: Section 4 of the Main Report will be revised as follows: "For oyster leases located within the projected impact area of a coastal restoration plan, at the end of its current lease term, a lease may be renewed for a term between one to fourteen years as a bobtail lease under La R.S. 56:428.1. For an operational project, La R.S. 56:428.2 provides that an oyster lease may be renewed for a one-year term, if the leaseholder stipulates that the waterbottoms under lease are capable of producing oysters." Additionally, the last sentence of the last paragraph will not be deleted; however, the phrase "operational and bobtail leases" will be deleted from the sentence.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

Comments of the
Louisiana Department of Environmental Quality

General Comments

The draft Louisiana Coastal Area Study Main Report is, overall, a good description of a first phase attempt at stemming the dramatic loss of Louisiana's coastal wetlands and rehabilitating that system into a functioning, sustainable ecosystem. LDEQ recommends that additional emphasis be placed on the fact that the plan represents the first phase of a program that will be implemented over several decades at every appropriate opportunity. LCWCRA 27

As the management structure is developed, LDEQ encourages as much independence between the Project Execution Team and the Science and Technology Program as practicable. These management functions should obviously be compatible, but appropriate independence will minimize potential implementation conflicts in the future. LCWCRA 28

As the specifics of the plan are developed, consistency between programs and policies must be a priority. In addition, there should be an awareness and avoidance of shifting lements of on-going programs to the Louisiana's coastal restoration program. LCWCRA 29

'he "areas of concern" presented in the draft LCA should be priorities for resolution. .DEQ recommends that more information be provided in reference to the constitutional mendment as opposed to mentioning the amendment accompanied by, in effect, a isclaimer. LCWCRA 30

LDEQ is pleased to see the references to water quality, particularly hypoxia, in the plan. The department intends to continue to make coastal water quality issues an administration priority. LCWCRA 31

Specific comments:

LDEQ concurs with the Governor's Office of Coastal Activities'/Department of Natural Resources comments. LCWCRA 32

LCWCRA 27: See response to LCWCRA 06.

LCWCRA 28: Concur. Main Report and Appendix A have been revised for increased clarity in this regard.

LCWCRA 29: Comment noted. As discussed in the FPEIS, Section 6, all civil works projects would be evaluated for consistency with the LCA Program.

LCWCRA 30: Text of the areas of controversy has been revised in both the Main Report and FPEIS. The Executive Summary no longer has such specific text relating to this issue, and a full explanation has been included in the FPEIS Section 7.

LCWCRA 31: Comment noted. The USACE will work with all appropriate state and Federal agencies to resolve issues which may prevent expeditious implementation of the LCA program.

LCWCRA 32: Comment noted.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

Comments of the
Louisiana Department of Transportation and Development

The Louisiana Department of Transportation and Development (DOTD) recognizes the importance of the LCA Ecosystem Restoration Project to the State of Louisiana and to the entire United States o f America. We fully support the plan to reverse the trend of degradation of Louisiana's coastal ecosystem.

The first sentence in the report's Executive Summary begins with a statement that Louisiana's coastal wetland loss has been ongoing since the early 1900's, with "*possible future negative impacts*" to the regional and national economy. The coastal wetland loss has negative economic impacts on-going today, and it is vitally important that action to reverse the trend begin as soon as possible.

Today's on-going cost to Louisiana is affecting our ability to protect the 2 million south Louisiana citizens from hurricane surges and localized flooding. It is affecting our coastal resident's ability to continue their livelihood in the commercial fisheries industry. It is affecting our ability to operate and maintain the infrastructure of the oil and gas industry. It is affecting recreational fishing and hunting that is part of our heritage passed down through the generations of south Louisiana residents. The coastal losses have affected every aspect of coastal Louisiana, economically, socially, and environmentally. In short, it is today affecting the ability of Louisiana's citizens to sustain communities all along the Louisiana coastline.

The first purpose of the LCA Study listed is to *"identify the most critical human and natural ecological needs of the coastal area"*. We fully endorse this purpose and agree that the human needs of the Louisiana coastal area are indeed critical to the State of Louisiana, the entire United States of America, and to the international commerce generated in the study area. LCWCRA 33

LCWCRA 34 As such, the project's proposed features must give full consideration to the impacts and effects of the existing infrastructure including; inland navigation on the Gulf Intracoastal Waterway (GIWW), shallow and deep draft ports, oil and gas production and distribution facilities, hurricane protection, flood control structures, hurricane evacuation routes as well as all highway structures, and agriculture lands.

Identified project features such as multi-purpose operation of the Houma Navigation Canal Lock in sub-province 3 and a new lock in the GIWW in sub-province 4 could potentially negatively impact navigation. The multi-purpose use of the Houma Navigation Canal Lock will significantly increase the frequency of operation of the lock over its intended use as a hurricane protection structure. The operation and maintenance cost of the lock will likewise increase significantly. The local sponsor of the Morganza to the Gulf Hurricane Protection Project, that includes the Houma Navigation Lock, must be compensated for the increased O&M cost associated with the continual operation of the lock facilities for coastal restoration purposes. LCWCRA 35

LCWCRA 33: Comment noted. The Main Report and FPEIS detail the socioeconomic benefits derived from the coastal ecosystem and the consequences of ecosystem decline.

LCWCRA 34: Concur. The impacts and benefits of restoration measure have been included in the assessment of critical needs criterion # 4. More detailed analyses will be conducted in the future as decision documents are prepared.

LCWCRA 35: The LCA Plan Execution Team will work with all affected parties while preparing decision documents for future implementation. Part of this process will be to resolve issues related to such cost-sharing issues such as the one raised here. Other potential negative impacts will also be analyzed and addressed.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

LCWCRA 35 (Continued)

The Study recognizes the on-going Morganza to the Gulf Hurricane Protection Project in sub-province 3. This project is critical in the protection of human life, property, and oil and gas infrastructure in Terrebonne and Lafourche parishes. Coordination of the project features of both the Morganza to the Gulf and the LCA is necessary for the residents of the Terrebonne basin to sustain their communities.

LCWCRA 36

Another on-going hurricane project in the LCA is not included in the main report. The Donaldsonville to the Gulf Hurricane Protection Project is in the feasibility planning stage and will provide a hurricane protection levee in sub-providence 2 from Bayou Lafourche to the West Bank Hurricane Protection Levee. This hurricane levee system and flood protection structures should be considered as an integral part of the LCA Study and included in the main report. These two hurricane protection projects, as well as the existing hurricane protection projects, can not be compromised by the LCA project.

LCWCRA 37

In Volume 1, Main Report , Section 4.7.8 Relocation of Roads, Bridges, Facilities/Utilities, Towns and Cemeteries - It is stated that *"based on available information, a preliminary list of possible relocations has been prepared. Relocations consist of pipelines, roads, new bridges, and utilities."* The relocation of the roads and new bridges is a major concern of DOTD. Not only in the cost of construction of these project features, but in the operation and maintenance as well. These costs should be cost-shared elements of the LCA project, not non-federal sponsor responsibilities.

LCWCRA 38

In Volume 2, Programmatic EIS, Section 6.2.3.2, Regulatory Programs - It is stated that *"Special attention will be paid to identifying ways to avoid and minimize potential impacts through the use of environmentally appropriate development approaches. For example, the construction of new highways can have significant direct, indirect, and cumulative wetland impacts. However, the use of environmentally appropriate design and construction techniques can greatly reduce potential adverse impacts. Specifically, the use of so-called "end-on" highway construction has been used to greatly reduce the environmental impacts of highways in coastal Louisiana. Identifying and employing such environmentally sensitive techniques will be critical for protecting Louisiana's valuable coastal wetlands, while also meeting important economic and safety needs."*

On many recent highway projects (i.e., LA 1 from Port Fourchon to Golden Meadow, I-49 South) the USACE-NOD endorses "end-on" highway construction. While in some cases this is appropriate, the overuse of this technique will limit or delay construction of some projects in the coastal zone due to the comparatively high cost of end-on construction. It is felt that "end on" construction is not always appropriate and that the public should be aware that needed infrastructure, including hurricane evacuation route construction, will be delayed for years if this technique is overused, due to its expense. Additionally, end on construction, while minimizing impacts in some areas, will also minimize required mitigation which would otherwise help build healthy wetlands and enhance their restoration potential.

LCWCRA 39

Special consideration should be given to the Third Delta project feature. It must be studied carefully in order to be supported by the local citizens. It can not be detrimental

LCWCRA 36: The USACE will ensure consistency of the Donaldsonville to the Gulf Feasibility Study with the ecosystem restoration purposes outlined in the LCA Program, while not compromising the needed level of flood protection. Text related to the ongoing Donaldsonville to the Gulf Feasibility Study has been added to the Main Report in Section 1.

LCWCRA 37: Relocations necessary for project implementation are considered project costs. It is the local sponsor's responsibility, as detailed in Section 4 of the Main Report, to either perform, or ensure the performance of, all necessary relocations. These costs are creditable toward the non-Federal cost-share obligations. Operations and maintenance costs are non-Federal responsibilities and are not eligible for Federal funding

LCWCRA 38: As outlined in Section 6 of the FPEIS and Section 4, it is the intention of the USACE to perform all activities, including planning and regulatory reviews of other permitted actions, in a manner consistent with the ecosystem restoration objectives outlined in the LCA program. It is not a given that more environmentally sound construction methods will increase either time to implementation or overall cost of needed projects in the coastal zone. As implied in the comment, it is possible to plan most activities in the coastal zone to maximize synergistic effects between development activities and coastal restoration efforts.

LCWCRA 39: Comment noted. The state, through DNR, has begun initial reviews of this project and has considered interests in drainage and freshwater issues in the affected areas in those efforts. The USACE will work with all affected parties as this project is evaluated in future feasibility studies.

Letter 36: Ms. Sidney Coffee, Louisiana Coastal Wetlands Conservation and Restoration Authority (LCWCRA)

LCWCRA 39 (Continued)

to the drainage projects, to the hurricane protection projects, and should not negatively impact DOTD's on-going efforts to improve the highway system, especially the future I-49 Corridor and hurricane evacuation routes.

LCWCRA 40

Existing flood control projects such as the MR&T project and Old River Control Complex must not be compromised in the implementation of the LCA project features. The existing flood control infrastructure and hurricane protection projects are integral and critical components of the Louisiana coastal area's human and ecological needs.

LCWCRA 41

In conclusion, DOTD totally supports the LCA project. And it should be fully implemented as soon as possible. But, equally important, the LCA project must also recognize the importance of maintaining and improving the area's socio-economic diversity. And the LCA project features must enhance the on-going efforts of hurricane protection projects, as well as maintaining and improving the existing infrastructure of both the flood protection and highway systems.

LCWCRA 40: Concur. No changes needed in the report.

LCWCRA 41: Comment noted. In addition, it should be noted that other ongoing efforts, such as hurricane protection, navigation channel improvements, and other transportation projects have the potential to contribute to ecosystem restoration objectives. Opportunities for program synergies will be fully explored.

Letter 37: Ms. Teri F. Lanoue, Louisiana Department of Environmental Quality, Office of Environmental Assessment (LDEQ-EA)

State of Louisiana
Department of Environmental Quality

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

July 12, 2004

Tim Axtman
U.S. Army Corps of Engineers
Planning, Programs, & Project Management Division
Coastal Restoration Branch, CEMVN-PM-C
P.O. Box 60267
New Orleans, Louisiana 70160-0267

RE: Louisiana Coastal Area (LCA)
Louisiana Ecosystem Restoration Study
Ascension, Assumption, Calcasieu, Cameron, Iberia, Jefferson, Lafourche, Livingston, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne &Vermilion Parishes, Louisiana

Dear Mr. Axtman:

LDEQ-EA-01

The Louisiana Department of Environmental Quality (LDEQ), Office of Environmental Assessment, has reviewed the draft PEIS prepared for the referenced Louisiana Coastal Area (LCA), LA Ecosystem Restoration Study. From the information provided it is our understanding that the Corps of Engineers intends to develop and recommend a near-term program of cost-effective projects to address the most critical natural and human ecological needs of coastal Louisiana.

Our review of the PEIS concentrated on your discussion of a project-by-project analysis of air quality impact concerns, particularly as they relate to nonattainment or maintenance areas in proximity of the Louisiana Coastal Area. As you indicate in DPEIS 3 - 75, a general conformity applicability determination would be made for each specific project as required by LAC 33:III.1405.A. We are pleased to see that at the appropriate time you intend to address general conformity issues that are currently applicable to the maintenance parishes of Jefferson, Orleans, St. Charles, St. Bernard, St. James and Calcasieu (*de minimis* levels are 100 tons per year for VOC only). As you may be aware, for purposes of determining *de minimis* levels of ozone precursor pollutants in the "severe" ozone nonattainment parishes of Ascension and Livingston, emissions must be less than 25 tons per year for both VOC and NOx. In the future, should additional coastline parishes become designated as nonattainment or maintenance, we trust that the Corps of Engineers will address all relevant state and federal air quality regulations in connection with pending LCA Ecosystem Restoration activities.

Regarding air quality issues, the Office of Environmental Assessment is available to assist you with regulatory and technical expertise. Should you need additional information, you may contact Mr. Ron Rebouche of my staff at (225) 219-3561.

Sincerely,

Teri F. Lanoue

Teri F. Lanoue
Environmental Manager
Environmental Planning Division

lw
DEQ0507070003

OFFICE OF ENVIRONMENTAL ASSESSMENT
P. O. BOX 4314 • BATON ROUGE, LOUISIANA 70821-4314 • TELEPHONE: (225) 219-3236 • FAX: (225) 219-3239
AN EQUAL OPPORTUNITY EMPLOYER

LDEQ-EA 01: Comments noted. Feasibility-level detailed decision documents will be developed on a project-by-project basis for each of the near-term critical restoration features. On a project-by-project basis, the USACE would address all relevant Federal and state air quality regulations.

Letter 38: Mr. Jim Delahoussaye, Louisiana Department of Environmental Quality, Office of Environmental Services (LDEQ-ES)

State of Louisiana
Department of Environmental Quality

KATHLEEN BABINEAUX BLANCO
GOVERNOR

JUL 0 8 2004

MIKE D. McDANIEL, Ph.D.
SECRETARY

Mr. Tim Axtman
U. S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Coastal Restoration Branch
CEMVN-PM-C;
P. O. Box 60267
New Orleans, LA 70160-0267

RE: Project No. DEQ0507070003; proposed Coastal Restoration; Dept. of the Army; Ascension, Assumption, Calcasieu, Cameron, Iberia, Jefferson, Lafourche, Livingston, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne and Vermilion Parishes

Dear Mr. Axtman:

LDEQ-ES 01

The Department of Environmental Quality (DEQ), Office of Environmental Services (OES), has received your request for comments dated July 1, 2004, regarding the above referenced project. Based on an in-house review of the information you have submitted to this Department, the OES has no objection to the implementation of the proposed project, provided that the issues listed below are satisfied if required. Please note that no field investigation was conducted on this project.

Please note that any project that results in a discharge to waters of the state may require submittal of a Louisiana Pollutant Discharge Elimination System permit application.

This Office recommends that you investigate the following requirements that may impact your proposed project:

1. if any of the proposed work is located in wetlands or other areas subject to the jurisdiction of the U.S. Army Corps of Engineers, you should contact the Corps in order to apply for any necessary permits;
2. if a permit is required from the Corps, a Water Quality Certification from OES may also be required;
3. all precautions should be observed to protect the groundwater of the region (SEE ATTACHMENT);
4. all precautions should be observed to control nonpoint source pollution from

OFFICE OF ENVIRONMENTAL SERVICES • P.O. BOX 4313 • BATON ROUGE, LOUISIANA 70821-4313

AN EQUAL OPPORTUNITY EMPLOYER

recycled paper

LDEQ-ES 01: Comments noted. Feasibility-level detailed decision documents will be developed on a project-by-project basis for each of the near-term critical restoration features. On a project-by-project basis, Section 404 permits would be obtained, a pollutant discharge elimination system permit would be obtained for those proposed projects that result in a regulated discharge to waters of the state; a Section 404(b)(1) evaluation would be conducted; a water quality certification would be requested; all precautions would be taken to protect groundwater of the region; all precautions would be taken to control nonpoint pollution construction activities; and storm water permits would be obtained, where required.

Letter 38: Mr. Jim Delahoussaye, Louisiana Department of Environmental Quality Office of Environmental Services (LDEQ-ES)

Mr. Axtman
Page Two (2)

LDEQ-ES 01 (Continued)

construction activities (SEE ATTACHMENT); and

5. the Department of Environmental Quality (DEQ), has stormwater general permits for construction areas equal to or greater than one acre. It is recommended that you contact Yvonne Wingate at (225) 219-3111 to determine whether your proposed improvements are covered under these general permits.

If you have any questions, please contact Jim Delahoussaye at (225) 219-3002.

Sincerely,

Jim Delahoussaye
Environmental Scientist Senior
Permits Division

JD\ar
Attachment

c:

Capital/Southwest/Acadiana/Southeast Regional Office
Surveillance Division

Letter 39: Ms. Lisa L. Miller, Louisiana Department of Environmental Quality, Office of Management and Finance (LDEQ-MF)

State of Louisiana
Department of Environmental Quality

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

July 15, 2004

Mr. Tim Axtman
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Coastal Restoration Branch
CEMVMN-PM-C
P. O. Box 60267
New Orleans, LA 70160-0267

RE: DEQ0507070003; DPEIS/Draft LCA; Ascension, Assumption, Calcasieu, Cameron, Iberia, Jefferson, Lafourche, Livingston, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne and Vermilion Parishes
Proposed Coastal Restoration Plans

Dear Mr. Axtman:

The Department of Environmental Quality, Office of Environmental Assessment and Office of Environmental Services has received your request for comments on the above referenced project.

There were no objections based on the limited information submitted to us. However, the following comments have been included and/or attached. Should you encounter a problem during the implementation of this project, please make the appropriate notification to this Department.

The Office of Environmental Services has made the following comments:

Please see the letter from the Office of Environmental Services, Permits Division.

"Any approval, or letter of no objection, granted by LDEQ is relevant only to the granting of funds for the proposed project. This does not relieve the applicant of his responsibility for obtaining any other permits or approvals necessary from LDEQ or other State, Local, or Federal agencies, nor does it influence the Department's ultimate decision on those permits or approvals. A copy of our brochure on construction best management practices is enclosed."

OFFICE OF MANAGEMENT AND FINANCE P.O. BOX 4303 BATON ROUGE, LOUISIANA 70821-4303

AN EQUAL OPPORTUNITY EMPLOYER

LDEQ-MF 01

LDEQ-MF 01: Comments noted. Feasibility-level detailed decision documents will be developed on a project-by-project basis for each of the near-term critical restoration features. On a project-by-project basis, the USACE would address all relevant Federal, state, and local regulations as well as obtain any appropriate permits or approvals. Response to comments from the LDEQ Office of Environmental Quality is specifically addressed in comment responses LDEQ-EA 01 and LDEQ-ES 01.

Letter 39: Ms. Lisa L. Miller, Louisiana Department of Environmental Quality, Office of Management and Finance (LDEQ-MF)

July 15, 2004
Page 2

Also, see the attached letter from the Office of Environmental Assessment/Environmental Planning Division.

Please forward all future requests to the Louisiana Department of Environmental Quality, Office of Management and Finance, Contracts & Grants, P. O. Box 4303, Baton Rouge, LA 70821-4303, and we will expedite your request as quickly as possible. Should you need any additional information please call me at (225) 219-3815.

Sincerely,

Lisa L. Miller
Contracts & Grants

llm:vhn
Enclosure

Letter 40: Honorable Kenneth L. Odinet, Sr., Louisiana House of Representatives (KLO)

932 Angela Avenue
Arabi, Louisiana 70032
Telephone: (504) 361-6685
(504) 279-2555
Fax: (504) 277-5664

STATE OF LOUISIANA
HOUSE OF REPRESENTATIVES
KENNETH L. ODINET, SR.
District 103

Joint Legislative Committee on Capital Outlay
Labor and Industrial Relations
Natural Resources
Ways and Means

July 26, 2004

Department of the Army
New Orleans District Corps of Engineers
Colonel Peter J. Rowan
U.S. Army District Engineer
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Public Meeting - LCA Restoration Study - July 27, 2004

Dear Colonel Rowan:

Prior commitments preclude my presence here tonight. Please allow this letter, as read by Mr. Edwin Doody, to serve as my comment to the Restoration Plan being discussed.

KLO 01

As expressed in a recent legislative resolution sent to Congress, ***HCR 68 of the 2004 Regular Session***, of major importance to my constituents is the closure of the MRGO. The plan submitted for review tonight contains no mention of the MRGO closure at any present or future date. In lieu of restoration to the wetlands, a $107 million dollar budget has been allotted for maintenance of the seldom used channel.

KLO 02

As an engineer, it is my opinion that to use quarry stone mentioned as a barrier to wave wash is fool hardy. The same stone has sunk to depths elsewhere on the channel, where-in it has been rendered useless. To continue along this path is not in the best interest of the residents and taxpayers of our community. The $107 million dollars should be reallocated to move service industries from the MRGO banks to the Mississippi River. Prior studies have indicated that the monies should be adequate to allow immediate closure to vessels in excess of a 16' draft. This action alone would truly be a wetlands salvation, along with true restoration.

KLO 03

A cost benefit study would surely reveal that the essential safety, life, limb, health and happiness of the entire community would win if the $107 million were used for closure of the MRGO.

I would be happy to assist in your future closure plans.

Very truly yours,

Kenneth L. Odinet, Sr.

KLO 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

KLO 02: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

KLO 03: Comment noted. Such investigations will be a part of justifying actions to modify the current authorized project.

Letter 40: Honorable Kenneth L. Odinet, Sr., Louisiana House of Representatives (KLO)

ENROLLED

Regular Session, 2004

HOUSE CONCURRENT RESOLUTION NO. 68

BY REPRESENTATIVES ODINET AND HUTTER AND SENATOR BOASSO

A CONCURRENT RESOLUTION

To memorialize the United States Congress, the Louisiana Congressional Delegation, and the United States Army Corps of Engineers to promptly close the Mississippi River Gulf Outlet in the manner contemplated by the Coast 2050 Plan and to memorialize the United States Congress and the Louisiana Congressional Delegation to authorize the full funding capability of the United States Army Corps of Engineers for the Inner Harbor Navigation Canal lock project.

WHEREAS, the Mississippi River Gulf Outlet (MRGO), a seventy-mile long manmade navigation channel which connects the Gulf of Mexico to the Port of New Orleans was authorized by the United States Congress in 1956 to be six hundred fifty feet wide at the surface, five hundred feet at the bottom, and to have a guaranteed channel depth of thirty-six feet; and

WHEREAS, initial expectations were that the channel would create a regional economic boom in the short term due to construction jobs, but also in the long term due to the industrial development associated with the commerce that would come to the area through the shipping concerns; and

WHEREAS, the impact of the MRGO on the surrounding parishes has been more loss than boom -- loss of nearly three thousand five hundred acres of fresh and intermediate marsh, loss of over ten thousand acres of brackish marsh, loss of over four thousand acres of saline marsh, loss of nearly fifteen hundred acres of cypress swamps and forest; and

WHEREAS, although the channel was authorized for only six hundred fifty feet across and thirty-six feet deep, today the channel is more than twenty-two hundred feet across, and the United States Army Corps of Engineers has routinely dredged the channel to over forty feet deep to accommodate bigger ships than were authorized by the United States Congress at an average cost of more than twenty-two million dollars; and

Page 1 of 3

Letter 40: Honorable Kenneth L. Odinet, Sr., Louisiana House of Representatives (KLO)

H.C.R. NO. 68 **ENROLLED**

WHEREAS, the loss of marsh and land has put the surrounding area at much greater risk for more frequent and more drastic tidal surges and more prolonged flooding as a result of tropical storms and hurricanes, with the severity getting worse as there is greater and greater loss; and

WHEREAS, the loss of marsh habitat has altered the ecosystem throughout the basin resulting in the loss of habitat for more than six hundred fifty thousand fur-bearing animals and similar losses to waterfowl, a movement from a dominant white shrimp fishery toward a dominant brown shrimp fishery, and the movement of oyster production farther and farther inland with the movement inland of the saltwater line, all of which alters the economic foundation for the region; and

WHEREAS, in addition to the alterations caused in the fishery and wildlife dependent enterprises, there are impacts on the everyday lives of the people who live in the area -- impacts which are being felt by a significantly larger population that must live with the threat of storm-driven flood surge, which will cause death and destroy personal property, both land and homes, and their communities through the loss of schools, libraries, public facilities including water purification plants and sewerage treatment plants; and

WHEREAS, also in danger of destruction due to the loss of land caused by the MRGO are major oil refineries and miles of pipelines, a sugar refinery, gas condensate recovery plants, and manufacturing plants which together can be valued in excess of three hundred billion dollars with a work force of nearly fifty thousand people at a time when the state is desperately seeking economic development opportunities; and

WHEREAS, as long ago as the 1960s it was becoming apparent that the anticipated economic benefits were not likely to materialize, and St. Bernard Parish officials began to call attention to the environmental impacts and damages to the point where by the 1980s the MRGO began to be termed an "environmental nightmare"; and

WHEREAS, in 1993 the Lake Pontchartrain Basin Foundation first called for the closure of the MRGO because of its environmental impact throughout the Pontchartrain Basin, and this was followed in 1998 by the "Coast 2050 Plan", adopted by the Department of Natural Resources, including its recommendation for closure of the MRGO; and

WHEREAS, in 1999, a MRGO task force convened by the Environmental Protection Agency at the request of Congressman Tauzin also recommended closure of the channel; and

Page 2 of 3

Letter 40: Honorable Kenneth L. Odinet, Sr., Louisiana House of Representatives (KLO)

H.C.R. NO. 68 **ENROLLED**

WHEREAS, the Congress of the United States has authorized the construction of a new lock on the Inner Harbor Navigation Canal which will serve to provide access to ocean going vessels which are now using the MRGO; and

WHEREAS, the Congress of the United States has failed to provide full funding capability for the lock project and thereby delayed its completion.

THEREFORE BE IT RESOLVED by the Legislature of Louisiana that the United States Congress and the Louisiana Congressional Delegation are hereby memorialized to authorize the full funding capability of the United States Army Corps of Engineers for the Inner Harbor Navigation Canal lock project.

BE IT FURTHER RESOLVED by the Legislature of Louisiana that the time for study and recommendation has passed and that the United States Congress, the Louisiana Congressional Delegation, and the United States Army Corps of Engineers are hereby memorialized to promptly close the Mississippi River Gulf Outlet in the manner contemplated by the Coast 2050 Plan.

BE IT FURTHER RESOLVED that a copy of this Resolution be forwarded to the United States Congress, the Louisiana Congressional Delegation, and the United States Army Corps of Engineers.

SPEAKER OF THE HOUSE OF REPRESENTATIVES

PRESIDENT OF THE SENATE

Page 3 of 3

Letter 41: Mr. Alfred W. Speer, Louisiana House of Representatives (AWS)

STATE OF LOUISIANA

ALFRED W. SPEER
CLERK, HOUSE OF REPRESENTATIVES

POST OFFICE BOX 44281
BATON ROUGE, LOUISIANA 70804-4281
(225) 342-7259

July 21, 2004

Colonel Peter J. Rowan, District Engineer
U. S. Army Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160-0267

AWS 01

Dear Colonel Rowan:

Pursuant to the direction of the 2004 Regular Session of the Louisiana Legislature contained in House Concurrent Resolution No. 68, please find enclosed herein a copy of the resolution.

Sincerely,

Alfred W. Speer

AWS/rj
Enclosures

AWS 01: Resolution is noted. In response to this and other comments, additional text has been incorporated into the Main Report and FPEIS to clarify this issue. Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 41: Mr. Alfred W. Speer, Louisiana House of Representatives (AWS)

ENROLLED

Regular Session, 2004

HOUSE CONCURRENT RESOLUTION NO. 68

BY REPRESENTATIVES ODINET AND HUTTER AND SENATOR BOASSO

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ORIGINATED

IN THE

House of Representatives

Clerk of the House of Representatives

Letter 41: Mr. Alfred W. Speer, Louisiana House of Representatives (AWS)

ENROLLED

Regular Session, 2004

HOUSE CONCURRENT RESOLUTION NO. 68

BY REPRESENTATIVES ODINET AND HUTTER AND SENATOR BOASSO

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WHEREAS, initial expectations were that the channel would create a regional economic boom in the short term due to construction jobs, but also in the long term due to the industrial development associated with the commerce that would come to the area through the shipping concerns; and

WHEREAS, the impact of the MRGO on the surrounding parishes has been more loss than boom -- loss of nearly three thousand five hundred acres of fresh and intermediate marsh, loss of over ten thousand acres of brackish marsh, loss of over four thousand acres of saline marsh, loss of nearly fifteen hundred acres of cypress swamps and forest; and

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Page 1 of 3

Letter 41: Mr. Alfred W. Speer, Louisiana House of Representatives (AWS)

H.C.R. NO. 68 **ENROLLED**

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WHEREAS, in addition to the alterations caused in the fishery and wildlife dependent enterprises, there are impacts on the everyday lives of the people who live in the area -- impacts which are being felt by a significantly larger population that must live with the threat of storm-driven flood surge, which will cause death and destroy personal property, both land and homes, and their communities through the loss of schools, libraries, public facilities including water purification plants and sewerage treatment plants; and

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WHEREAS, as long ago as the 1960s it was becoming apparent that the anticipated economic benefits were not likely to materialize, and St. Bernard Parish officials began to call attention to the environmental impacts and damages to the point where by the 1980s the MRGO began to be termed an "environmental nightmare"; and

WHEREAS, in 1993 the Lake Pontchartrain Basin Foundation first called for the closure of the MRGO because of its environmental impact throughout the Pontchartrain Basin, and this was followed in 1998 by the "Coast 2050 Plan", adopted by the Department of Natural Resources, including its recommendation for closure of the MRGO; and

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Page 2 of 3

Letter 41: Mr. Alfred W. Speer, Louisiana House of Representatives (AWS)

H.C.R. NO. 68 **ENROLLED**

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WHEREAS, the Congress of the United States has failed to provide full funding capability for the lock project and thereby delayed its completion.

THEREFORE BE IT RESOLVED by the Legislature of Louisiana that the United States Congress and the Louisiana Congressional Delegation are hereby memorialized to authorize the full funding capability of the United States Army Corps of Engineers for the Inner Harbor Navigation Canal lock project.

BE IT FURTHER RESOLVED by the Legislature of Louisiana that the time for study and recommendation has passed and that the United States Congress, the Louisiana Congressional Delegation, and the United States Army Corps of Engineers are hereby memorialized to promptly close the Mississippi River Gulf Outlet in the manner contemplated by the Coast 2050 Plan.

BE IT FURTHER RESOLVED that a copy of this Resolution be forwarded to the United States Congress, the Louisiana Congressional Delegation, and the United States Army Corps of Engineers.

SPEAKER OF THE HOUSE OF REPRESENTATIVES

Donald E. Hines

PRESIDENT OF THE SENATE

Page 3 of 3

Letter 42: Mr. Ralph L. Laukhauf, Jr., Louisiana Hydroelectric (LH-EIS)

LOUISIANA HYDROELECTRIC
LIMITED PARTNERSHIP

Administrative Office
409 Texas Street

Vidalia, Louisiana 71373-3320

(318) 336-9666
Fax (318) 336-9062

August 23, 2004

Dr. William P. Klein, Jr. (CEMVN-PM-RS)
U. S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on the DRAFT Programmatic Environmental Impact Statement (DEPEIS)

Dear Mr. Klein:

LH-EIS 01

The current proposed tentatively selected plan (TSP) offers specific projects for the Lower Atchafalaya River which would provide localized area sediment enhancements while improving the efficient utilization of available fresh water/and sediments with the long term goal of enhancing the deltaic growth for both the Atchafalaya River and the Wax Lake Outlet.

The most significant environmental restoration potential would, however, come from the implementation of the Mississippi River Delta Management Study with the goal to utilize the maximum available flow and sediments from the Mississippi River's delta flow. While complicated by navigational requirements as well as the scale of the study efforts, thinking "outside of the box" and developing long term innovative solutions to the Mississippi River's sediment's maximum utilization offers the greatest hope for Subprovince 1, 2, and 3's environmental restoration.

Acceleration of these study efforts should, in our opinion, be the keystone of the LCA's environmental restoration efforts.

Sincerely,

Ralph L. Laukhuff, Jr.
Manager Corporate Relations
And River Survey

RLL/lw

Catalyst-Old River Hydroelectric Limited Partnership dba/Louisiana Hydroelectric Limited Partnership

LH-EIS 01: The Mississippi River Delta Management Study is contained in the LCA Plan as part of the Mississippi River Hydrodynamic Model Large-scale and Long-term Study proposed for standard authorization. The Mississippi River Delta Management Study was determined to be too complex to have a feasibility-level decision document completed and construction begun within the next five to ten years. Consequently, it did not pass the first sorting criteria for restoration features during the plan formulation process. Please see Section 3 of the LCA Study for further information regarding application of sorting criteria to restoration features.

Letter 43: Mr. Ralph L. Laukhauf, Jr., Louisiana Hydroelectric (LH-MR)

LOUISIANA HYDROELECTRIC
LIMITED PARTNERSHIP

Administrative Office
409 Texas Street

Vidalia, Louisiana 71373-3320

(318) 336-9666
Fax (318) 336-9062

August 23, 2004

Mr. Tim Axtman CEMVN-PM-C
U. S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on DRAFT Louisiana Coastal Area (LCA)
Louisiana - Ecosystem Restoration Study

Dear Mr. Axtman:

LH-MR 01

The Mississippi River's Hydrodynamic Model is, in our opinion, one of the essential elements in the LCA's ecosystem restoration program development. It is, therefore, critical that this independent study utilize the available specialized expertise of the world in geomorphic studies as well as various types of physical and computational modeling.

LH-MR 02

To ensure an understanding of the flows and sediments available to the Mississippi and Atchafalaya Rivers below latitude of Old River, as well as the Louisiana coast, it is necessary that both short term and long term river system trends be analyzed. As such, the need for a comprehensive evaluation of the following elements is essential to LCA Near-Term project's developmental sustainability:

A. Effects of Future Operational Water Control Changes in Mississippi River Basin (Example: Potential Missouri River Basin hydrograph modifications and recent TVA annual hydrograph modifications).

B. Long term analysis of the Mississippi River Basin's hydrographic cycle trends.

C. Long Term effects of the 1930's and 1940's Mississippi River cutoff program which initially lowered river flood stages, but lately has resulted in an aggradation of river stages at the Vicksburg, St. Joe and Natchez gauges.

D. Short and long term effects of the Red River Waterway's ongoing construction, operations and maintenance.

E. Effects of multiple Mississippi and Atchafalaya River coastal restoration water/sediment fresh water diversions.

Catalyst-Old River Hydroelectric Limited Partnership dba/Louisiana Hydroelectric Limited Partnership

LH-MR 01: Comment noted.

LH-MR 02: The combined level of diversion proposed in the LCA Plan would be less than 10 percent of average flow, which is the flow condition on which the design discharges presented in the report are based, and should not significantly effect current hydrologic trends. Long-term trends and actions are essential to appropriate river management, therefore information such as the elements suggested will be forwarded to the appropriate project management staff leading the Mississippi River Hydrodynamic Model Large-scale and Long-term Concepts Study.

Letter 43: Mr. Ralph L. Laukhauf, Jr., Louisiana Hydroelectric (LH-MR)

LH-MR 02 (Continued)

F. Quantity and quality of sediments available at the Coast through the riverine systems. Study also needs to include the review of potential increases in basin sediments from various reservoirs based on aggradation or fill.

Sincerely,

Ralph L. Laukhuff, Jr.
Manager Corporate Relations
And River Survey

RLL/lw

Letter 44: Mr. Michael J. Bourgeois, Louisiana Landowners Association, Inc. (LLA)

Louisiana Landowners Association, Inc.
Post Office Box 44121
Baton Rouge, Louisiana 70804-4121
Telephone: (225) 927-5619
Telecopier: (225) 928-7339

Executive Committee
ROBERT J. KINLER, *President*, New Orleans, Louisiana
PHILLIP E. BOYDSTON, *First Vice President*, Baton Rouge, Louisiana
ALLAN B. ENSMINGER, *Second Vice President*, DeRidder, Louisiana
DENIS MURRELL, *Secretary-Treasurer*, Bayou Goula, Louisiana
N. BUCKNER BARKLEY, JR., Marrero, Louisiana
CHARLES R. LeBLANC, JR., Metairie, Louisiana
ALEX J. PLAISANCE, JR., Golden Meadow, Louisiana
DAVID M. RICHARD, Lake Charles, Louisiana
RUDY C. SPARKS, Patterson, Louisiana
GEORGE A. STRAIN, New Orleans, Louisiana
Directors
P. ALBERT BIENVENU, New Orleans, Louisiana
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HUGH C. BROWN, Patterson, Louisiana
G. WADE BURDIN, Lafayette, Louisiana
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GORDON KELLER, Lafayette, Louisiana
GREGORY C. LIER, Harvey, Louisiana
RANDALL S. MOERTLE, Lockport, Louisiana
CLAUDE V. PERRIER, III, Houston, Texas
WILLIAM B. RUDOLF, Metairie, Louisiana
JOHN F. SCHNEIDER, Ponchatoula, Louisiana
JAKE TREWIN, Richardson, Texas
MICHAEL VANOVER, Morgan City, Louisiana
GORDON WOGAN, New Orleans, Louisiana
JOHN W. WOODARD, Houma, Louisiana
Directors Emeritus
STANLEY STOCKSTILL
L. P. LeBOURGEOIS, JR.

MICHAEL J. BOURGEOIS, *Executive Director*, Baton Rouge, Louisiana
NEWMAN TROWBRIDGE, JR., *General Counsel*, Lafayette, Louisiana

August 23, 2004

U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Attention: Mr. Tim Axtman
CEMVN-PM-C

Re: Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study

Gentlemen:

LLA 01

This letter of comment on the above referenced documents is submitted on behalf of Louisiana Landowners Association (LLA), an organization made up of 250 member individuals and corporations that collectively own approximately 3.5 million acres of land in the Louisiana coastal region. Restoration of the eroding and deteriorating resource-rich Louisiana coast is important to all citizens of the state and the nation, but no other group of stakeholders will be more affected than the landowners.

Thank you for providing the opportunity to comment on the *Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Programmatic Environmental Impact Study.* These documents referred to as the "LCA Study Report" and the "DEIS" herein, present components of a restoration program that is vital to the survival of both the land and people of south Louisiana. The conscientious effort of those who worked on the study and prepared the documents is appreciated.

We also recognize that the LCA report is an outgrowth of the coastal zone management and planning efforts that began in Louisiana in the 1970s, the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) program initiated in 1991, and the Coast 2050 planning efforts that took place in 1998-1999.

LLA 01: Comment noted.

Letter 44: Mr. Michael J. Bourgeois, Louisiana Landowners Association, Inc. (LLA)

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The comments and recommendations made herein are intended to be constructive and to contribute to refining the draft reports. Our comments follow.

GENERAL AND PROGRAMMATIC COMMENTS

Purpose and Structure of the LCA Program
Before restoration of Louisiana's coast can be achieved a bold, clear plan must be formulated. Such a plan does not presently exist. The Coast 2050 Plan addresses the most critical restoration issues facing coastal Louisiana and had the benefit of large public participation in its formulation. For these reasons, the Coast 2050 Plan should continue to be used as the blueprint for coastal restoration. LLA 02

Administrative aspects of the program

LLA is concerned about the growth of duplicative and overlapping programs, each of which has responsibility for some aspect of maintaining the environment and the infrastructure of the coast. These include, but are not limited to, the state's coastal management and restoration programs, CWPPRA, the state and federal wetland regulatory and mitigation programs, flood protection and drainage, highways, ports and navigation. How do the pieces fit together? None of these programs have provided a clear vision of what the coastal area should be like in the future. The proposed LCA will form yet another layer of administrative structure over the already cumbersome coastal restoration and infrastructure maintenance efforts. It promises no relief or streamlining, only more co-ordination. The LCA program should not supercede these older programs, unless they are effectively integrated into or coordinated with the LCA or de-authorized. LLA 03

Overlapping duplicative efforts can only further muddle the decision-making process and accountability. The organizational structure is too intricate and cumbersome and is likely to slow response to the unfolding catastrophe. This duplication has the additional disadvantage of making public (stakeholder) participation more difficult.

The LLA favors consolidation not further duplication and recommends a consolidated management structure for the various coastal restoration programs, eliminating duplication and recommending legislative de-authorization of those programs that are outmoded.

Accountability –

Along with consolidation, the coastal restoration effort needs more **accountability.** Additional safeguards must be taken against abuse of authority, and other dangers inherent to large public programs. Because of its ultimate size and importance, the LCA administrative process should include a formalized code of ethics, and procedures for enforcing that code. The program should also include provisions for an appeals process LLA 04

LLA 02: The LCA Plan's plan formulation process began using strategies presented in the Coast 2050 Plan. Future authorizations of the LCA Plan and other programs, such as CWPPRA, may further implement recommendations in the Coast 2050 Plan.

LLA 03: Please see General Response #6 regarding the relationship of CWPPRA and LCA.

LLA 04: The USACE agrees that the issue of accountability is important in an effort of this magnitude. However, the execution of the LCA Plan effort, as well as the ultimate approval and construction of any features of a plan authorized by Congress, is and will be subject to the same laws, regulations, and codes applicable to any Federal or state-funded water resource activities as well as those of the professions associated with the effort. Unless so specified by Congress in authorizing the proposed plan or any part of it, and ratified by the President in signing the legislation, no laws regarding the accountability of the government or its representatives, or those regarding the rights of the public relative to those actions, will be superceded.

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that leads to formal resolution and specific answers to questions, problems, grievance and disputes. LLA 04 (Continued)

Stakeholder Participation

LLA is concerned about effective participation in this program, which has the potential of remolding the region for the future. While Louisiana's federally approved coastal management program, CWPPRA, the Coast 2050 program the Barataria-Terrebonne Estuary Program, and planning efforts of the Pontchartrain Basin Program were all designed for maximum stakeholder participation, the LCA planning process was conducted in isolation with minimum public exposure.

In June 2002, Louisiana Landowners Association published a position paper entitled *Coastal Restoration in Louisiana: Striving for a Higher Level.* This paper was not a casual document. It was the result of a considerable effort undertaken by LLA to express concepts, concerns and recommendations regarding the restoration efforts. The paper was widely disseminated and presented to the members of the CWPPRA Task Force, The Louisiana Advisory Commission on Coastal Restoration and Conservation, elected public officials, and various individuals in the state and federal agencies involved in coastal restoration and the LCA study group. We were surprised to see that there was no reference to the LLA position paper in the draft LCA documents. At this time the LLA formally submits the paper as part of our comments and response to the LCA draft documents. LLA 05

The members of LLA have consistently demonstrated good stewardship of their land and support of the overall restoration effort. The administration of the LCA program must provide clear channels of communication with landowners and their input into the planning and decision-making process must be given full consideration.

The pathway for input for landowners, as presented in the LCA draft documents, seems to be through the Louisiana State Wetland Authority and the Louisiana Advisory Commission on Coastal Restoration and Conservation. This is not acceptable. The pathway should be more direct and more clearly defined in the program's administrative framework.

Landowner management and mitigation programs should be recognized as part of non-federal contribution to the coastal restoration program. The landowner-coastal restoration partnership should be encouraged through easements, leases and tax incentives.

Science and technology program

LLA is interested in the science and technology component of the program which will have far reaching implications on the restoration effort including project design, the wise LLA 06

LLA 05: In regards to public participation and communication pathways, please see response to HMH-MR 06. The USACE recognizes that there is a large amount of information available regarding coastal preservation and restoration and that not all of the information was referenced in the LCA Plan. In response to public comment regarding this issue, a critical responsibility of the S&T Office will be data assimilation and management to ensure that information from as many resources as possible is incorporated into the continued development of the plan. Additionally, local planning efforts will be revisited as a component of large-scale, long-term studies. The paper referenced in the comment was included as an attachment to the comment letter. However, because of the length of the paper, it was not included in this appendix. A copy is included in the LCA Program Project file and is available for review upon request.

LLA 06: Comment noted.

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use of tax dollars, the future welfare and safety of coastal area residents, and the future of research and education in Louisiana. We have concerns about the magnitude of funding and particularly the proposed structure of the Science and Technology Program.

We believe that the structure and administration of this program needs further publi discussion and input. While science managed by government appointed czars an selected panels might have some merit from the standpoint of expediting the progran this approach must include very stringent measures to prevent abuse and to provid results.

This program must not be the exclusive domain of government agencies and academi Professional organizations representing scientists, engineers and planners, must b allowed to represent their members in this process. Like the LCA administrativ structure, the science and technology component must have ethics and appeal provisions.

LLA 06 (Continued)

TECHNICAL CONSIDERATIONS

A renewed sense of urgency is needed

It is clear that total funding for immediate implementation of some of the most critical, large-scale projects is not currently available. Large, long-term projects must be divided into stages. Because delay of these projects is an invitation to disaster, an immediate commitment to implementation of initial stages must be a fundamental part of the LCA plan. We can't wait for the results of ten-year studies and pilot projects before key long-term projects are initiated. Launching into a new round of demonstration projects would be inconsistent with a needed sense of urgency in addressing a natural disaster that is already at a crisis stage. The LLA recommends that instead of initiating new demonstration projects, the LCA program should objectively evaluate the CWPPRA projects that have already been implemented.

LLA 07

Third Delta

In the LCA plan, the Third Delta Project is designated as a study and included in the section on "Studies on Long-Term, Large Scale Restoration Concepts." The Final Report, Phase 1, *Reconnaissance-level Evaluation of the Third Delta Conveyance Channel Project* was completed by CH2M Hill in June 2004 for the Louisiana Department of Natural Resources. The study report concluded that the project is conceptually sound and that the initial estimates of delta building rates made by S. M. Gagliano and J. L. van Beek in 1999 were conservative. This project should be given the highest priority with defined stages and a target schedule for implementation. The first stage should be acquisition of right-of-way in growth areas, such as the area where the conveyance channel will cross the natural levee ridges of Bayou Lafourche. Right-of-way acquisition should be identified as a near-term stage with designated funding in the LCA study report.

LLA 08

LLA 07: The creation of demonstration projects through the LCA Plan serves to answer key scientific and technological uncertainties before restoration projects are undertaken. The CWPPRA projects have provided valuable scientific information on the ecosystem and restoration techniques; however, they have not answered all uncertainties necessary for successful program implementation. For more information on demonstration projects in the LCA Plan and the uncertainties that they are designed to address, please see Section 4 of the Main Report.

LLA 08: The Third Delta restoration feature (Subprovinces 2 & 3) was deemed too complicated to have feasibility-level decision documents completed and construction started in the next five to ten years of plan implementation. Based on this determination, the Third Delta restoration feature did not pass sorting criteria #1 in establishing near-term critical restoration features. The referenced study completed for the LDNR only assessed technical feasibility of proposed concept, but did not undertake analysis of alternatives of the full-range of benefits or impacts. This report would become the basis for gathering supplemental information to complete USACE planning documentation to complete a feasibility-level analysis of the Third Delta restoration feature. The USACE cannot undertake right-of-way acquisition for areas that are potentially affected by implementation of the Third Delta restoration feature concept until such time that feasibility-level analyses have been completed and the project is congressionally authorized.

The Third Delta project is currently included in the LCA Plan for long-term, large-scale study, which will resolve uncertainties to support consideration of the restoration feature for a future authorization request.

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MRGO Closure

There is little debate that the MRGO has caused and continues to cause extensive environmental damage and increased danger of levee breaches from hurricane surge. The LCA draft report recognizes the MRGO as a near-term critical restoration problem, but recommends placing rocks along the bank at a cost of $80 million as the near-term remedy. The LAA supports the proposal of the St. Bernard Parish Government to re-allocate the rock money for construction of a gated, tidal control structure at the intersection of the Bayou La Loutre ridge and the MRGO channel. If properly designed, such a structure can control the environmentally lethal tidal movement and salt water intrusion and also accommodate the small number of cargo vessels that presently use the channel until such time as the authorized lock connecting the Inner Harbor Navigation Canal and the Mississippi River is completed. LLA 09

Barataria Basin barrier shoreline restoration

LLA is generally supportive of barrier island restoration, but has some concern about destroying the integrity of protective features like Ship Shoal and excavating large borrow areas within the coastal area as a source of sand. It is also questionable whether a number of barrier islands can be restored in their historic locations. LLA 10

Need for a second line of defense

LLA recommends that an alternative be added to the LCA study report and DEIS stating that retreat of the Gulf shore in response to regional subsidence cannot be stopped and that a second line of defense is needed across much of Louisiana's coastal zone. As the distance between the barrier islands and the muddy inner shoreline of bays increases and the base level of the barrier islands continues to sink it is inevitable that flood protection levees will be directly exposed to open water conditions. The levees are largely constructed of earth and not designed to withstand prolonged wave attack along an open shore. Storm surge effects will also continue to move progressively inland as a result of subsidence and marsh breakup further endangering the levees. For these reasons a second line of defense is needed in conjunction with the hurricane levees. The second line of defense should consist of barriers islands, reefs and hard structures. Because this work will be slow and expensive, it must be given highest priority and not deferred until a crisis occurs. LLA 11

Reef building and enhancement of fisheries habitat in submerged land areas, was a prominent feature of the Coast 2050 Plan, but is conspicuously absent in the LCA plan. Reefs are a vital component for buffering coastal wetlands and flood protection levees against waves and storm surge and for prolonging the productivity of the vast submerged areas that cannot be restored to emergent wetlands. LLA 12

LLA 09: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

LLA 10: Project-induced impacts to offshore borrow sites, such as to Ship Shoal, would be evaluated and documented in subsequent NEPA environmental assessments. The Minerals Management Service (MMS) has jurisdiction over these offshore areas and is the regulating agency regarding their use. As a cooperating Federal agency and part of the LCA Planning Team, the MMS has been quite actively involved with the LCA study process and continues to provide guidance regarding avoiding, minimizing and reducing potential impacts to these valuable offshore resources.

LLA 11: As indicated in the documentation of plan formulation in Section 3, the focus of the current LCA planning effort was redirected toward the critical needs that could be met in the next 5 to 10 years. Those features or concepts that could not reasonably be approved and brought to construction in that timeframe were specifically eliminated from possible recommendation in this report. Development of a second line of defense alternative, while relevant to coastal planning considerations, would be more appropriately analyzed under the large-scale, long-term restoration scenario. As described in the Study Authority section of the FPEIS, the LCA Plan is authorized by the U.S. House of Representatives and the U.S. Senate with a view to determining the advisability of improvements or modifications to existing improvements in the coastal area of Louisiana in the interest of hurricane protection, prevention of saltwater intrusion, preservation of fish and wildlife, prevention of erosion, and related water resource purposes**.** The "Study Purpose and Scope" section states that the goal of the LCA Study is to reverse the current trend of degradation of the coastal ecosystem. Section 4 of the FPEIS discusses potential Future Without-Project conditions regarding flood control and hurricane protection levees.

Letter 44: Mr. Michael J. Bourgeois, Louisiana Landowners Association, Inc. (LLA)

LLA 12: Barrier reef resources are considered in the FPEIS as a significant resource, as evidenced by presentation of information in the “Barrier Reef Resources” and “Barrier Reef Resources” section. The restoration of barrier reefs in Subprovince 3 was a restoration feature that was considered throughout the plan formulation process and was eliminated from further consideration because the engineering and design of these features could not be completed and construction started with the next 5 to 10 years .

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LLA 13

Allocation of Mississippi/Atchafalaya River Flow

The members of the LLA have consistently expressed concern about the allocation of Mississippi – Atchafalaya flow into the coastal area. Most of the LCA plan is made up of recommendations for river diversions into wetland areas, but diversion locations seem to have been selected at locations of convenience. Diversions are being proposed without the benefit of an allocation model that considers both the available water/sediment budget and the needs and characteristics of potential receiving areas.

At present too much river water enters the Atchafalaya and Penchant Basins and not enough enters the Barataria and Terrebonne Basins. The Mississippi Delta Management Study, as discussed in the LCA report, may address part of the need for a water-sediment allocation methodology and model, but seems to be focused more on the problem of sediment loss through navigation channel outlets. The allocation model must also consider operation of the Old River Control Structure and distribution and management of sediment-charged river water through the entire system, including southwestern Louisiana.

Small diversion at Hope Canal

LLA 14

The proposed Small diversion at Hope Canal (CWPPRA Maurepas diversion) and the Small Diversion at Convent/Blind River have potential benefits, but pose problems of backwater flooding in East Baton Rouge, Ascension, Livingston, St. John the Baptist and Tangipahoa Parishes, which may place severe limitations on usefulness of the diversions.

As an alternative the LLA recommends a re-evaluation of the use of the Bonnet Carre floodway as a corridor for river water introduction into the Pontchartrain Basin. Introduction of river water through Bonnet Carre would benefit the entire basin including the Lake Maurepas and Mississippi Sound areas. The $30 million allocated in the LCA report for a small diversion at Hope Canal should be re-allocated toward introduction of river water into the Pontchartrain Basin through the Bonnet Carre Floodway.

LLA 15

Small Bayou Lafourche reintroduction

The $90 million recommended in the LCA Tentatively Selected Plan for the "Near-term for the Small Bayou Lafourche Reintroduction Project" should be re-directed toward right-of-way acquisition for the Third Delta project.

LLA 16

Medium diversion with dedicated dredging at Myrtle Grove

This proposal has some merit. However, its relationships to a re-authorized Davis Pond diversion and the Third Delta Project are not clear.

LLA 13: Proposed river diversion locations of the LCA Plan restoration features were chosen based upon several considerations, including the locations of historic natural crevasses along the Mississippi River. Locating diversion sites where there have been natural crevasses was considered a means of working with the natural geomorphology and hydrology thereby "working with nature," and not counter to it.

The USACE agrees with the need for a comprehensive allocation model. The LCA Plan has a number of components that are designed to address deficiencies in the study details during the next phase. These components are listed in Table MR - 20b under Large-scale and Long-term Concepts Requiring Detail Study.

LLA 14: We do not believe that these diversions will cause a problem with backwater flooding, or that this will place limitations on the usefulness of the diversions. This will be investigated fully during detailed design. Detailed evaluation of potential adverse and beneficial impacts of the proposed diversions located near Hope Canal and Convent/Blind River would be accomplished during subsequent feasibility-level investigations of those restoration features. Pending authorization of the LCA Plan feature for Programmatic Authority to initiate studies for modifications to existing structures and/or operation management plans, the use of the Bonnet Carre floodway as a restoration feature will be considered.

LLA 15: Comment noted.

Letter 44: Mr. Michael J. Bourgeois, Louisiana Landowners Association, Inc. (LLA)

LLA 16: A more detailed discussion of the relationship between these restoration features for which conditional authorization is being requested have been added to the Main Report. In short, the Myrtle Grove and Davis Pond features, will produce related effects on salinity, but are expected to produce very different and necessary direct hydrologic and land building effects in the ecosystem. Careful assessment and management will be necessary to account for their combined salinity effects. The Myrtle Grove feature also provides direct land-building and sustainability to an area that would likely be affected in only a secondary manner by the long-range Third Delta concept. In addition, the area of direct effect from the Myrtle Grove feature is experiencing ongoing transition and loss; trends that indicate the lack of immediate attention and could result in significant changes over a greater extent of the estuary.

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Re-authorization of the Caernarvon Diversion

LLA 17

This proposed project to optimize marsh creation has merit. An additional small conveyance channel in the vicinity of Violet is also needed in conjunction with the closure of the MRGO for marsh and estuary maintenance and enhancement.

Chenier Plain

LLA 18

The LCA plan completely ignores southwestern Louisiana, which contains half of the state's coastline. For recommendations please refer to the attached LLA paper.

Bayou Penchant

LLA 19

The LCA study plan proposes to direct more water through the Penchant Basin. The LCA study largely ignores a comprehensive basin plan developed over a period of years by the National Resources Conservation Service (NRCS) in conjunction with the landowners and other stakeholders of this large basin. Major components of the NRCS plan have been approved as a CWPPRA project. LLA recommends that the approved CWPPRA project be retained and that no additional fresh water be introduced into this basin.

In reference to the Penchant area and other marsh basins, we recommend that the LCA program move to resolve long-standing disagreements between landowners and restoration and permitting decision makers regarding best management practices for marshes. For example, landowners do not support filling of all oil and gas canals or leveling of spoil banks. The landowners also recommend bank stabilization in wetland areas characterized by floating marsh and thick organic soils as a best management practice, but this technique that has proven to be effective in protecting interior marshes is usually opposed by the regulatory agencies.

Dedicated dredging

LLA 20

Dredges are important tools for delivery of sediment for building ridges and restoring marshes in critical areas, but dredging is far from a cure all. A sustainable ecosystem cannot be achieved with dredges and pumps alone.

Mesh the restoration program with the regulatory and mitigation programs

LLA 21

The regulatory and mitigation program continues to follow a divergent path from the coastal restoration efforts. A specific task of the LCA program should be to focus the restoration efforts and the regulatory/mitigation efforts on common achievable goals. This task should include recognition of landowner management and mitigation plans and a procedure for integrating these plans into the overall restoration program.

LLA 17: Comment noted. A diversion and conveyance channel located in the vicinity of the town of Violet feature was initially considered but was later determined to present unacceptable adverse human environment impacts to human inhabitants in the area.

As described in the FPEIS, the restoration feature of rehabilitating the Violet Siphon, was considered as having limited or no "critical needs criteria" value.

LLA 18: Please see General Response #11 regarding the number of proposed features in Subprovince 4.

LLA 19: The Penchant Basin Plan was included in the list of near-term critical features that made up the Plan Best Meeting Objectives (PBMO). In the assessment of the PBMO for implementability it was determined that not all of the identified features could be brought to construction within the near-term time frame due to probable funding limitations. In addition those features with the highest degree of engineering and NEPA-readiness were identified for immediate scheduling. In consideration of this information, it was determined that the most effective implementation strategy would be to allow the Penchant Basin Plan to proceed to construction approval in the CWPPRA program. The description of the sequencing process in Section 4.1 of the Main Report has been revised to reflect this rationale.

LLA 20: While a sustainable ecosystem cannot be achieved with dredges and pumps alone, these tools can be an important part of a restoration plan that includes other components such as sediment diversions and protection of created/restored marsh and ridges.

Letter 44: Mr. Michael J. Bourgeois, Louisiana Landowners Association, Inc. (LLA)

LLA 20 (Continued): The LCA Plan contains a suite of restoration features, including dedicated dredging and the beneficial use of dredged material. Considering the breadth and depth of the LCA Plan, evidence does not support the suggestion that dredges and pumps are the only "cure all" for addressing Louisiana's critical ecological needs.

LLA 21: Comment noted.

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Concluding recommendation

We applaud the adaptive management aspects of the proposed program. However, please be aware that adaptive management is no substitute for plans built on sound science and engineering principals. The restoration plan must not be static. It must be a process, with constant feedback from lessons learned during implementation. It must constantly embrace changes in need, refined goals, fresh ideas, and new technology. LLA 22

We would like to again thank you for providing an opportunity to comment on this important program. We remain supportive of the objectives of the coastal restoration effort and, as indicated previously, our comments are intended as constructive criticism.

Sincerely yours,

Louisiana Landowners Association, Inc.

By: Michael J. Bourgeois
Michael J. Bourgeois, Executive Director

Attachment

LLA 22: Comment noted. These concerns are addressed in Appendix A, which describes the S&T Program.

Letter 45: Mr. Ralph V. Pausina and Mr. Mike Voisin, Louisiana Oyster Task Force (LOTF)

LOUISIANA OYSTERS
Louisiana Oyster Task Force

August 19, 2004

To: Tim Axtman
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Coastal Restoration Branch
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

From: Ralph V. Pausina
Chairman, Coastal Restoration Committee
Louisiana Oyster Task Force
6551 Louisville St
New Orleans, LA 70124-3223

Dear Mr Axtman,

These are our comments on the draft Environmental Impact Statement and the draft Louisiana Coastal Area Ecosystem Restoration Study.

LOTF 01

Our area of concern relates to the LCA, Louisiana- Ecosystem Restoration Study; Main Report; Executive Summary. Particularly, Number 4 Plan Implementation, 4.7 Real Estate, 4.7.13 Valuation of Existing Oyster Leases, page MR-210.

In the first Paragraph, the second sentence which ends "which gives the leaseholder the exclusive right to harvest oysters within the leased area" is not accurate. We would like to furnish information to the study writers to correct the inaccuracy.

An area when first leased either does not contain any oysters or not enough to support a profitable business. The leaseholder must first stabilize the bottom, then plant cultch and/or young oysters, tend to them until they reach marketable size. Only after this process, which can take four to five years is completed, can the owner begin to harvest those oysters which can be marketed. The stabilizing and planting continues throughout the farming operation.

1600 Canal Street, Suite 210
New Orleans, LA 70112
1.800.222.4017

LOTF 01: The state and the U.S. believe the 2nd sentence of the 1st paragraph is accurate. The exclusive right to harvest would include the exclusive right to cultivate and otherwise prepare a site for oyster production. The State of Louisiana, as represented by the Louisiana Department of Natural Resources, is the proposed non-Federal sponsor, and it will be responsible for acquiring oyster leases anticipated to be adversely impacted by a project. The oyster leaseholders will be offered just compensation, in accordance with the Louisiana Constitution and state law.

Letter 45: Mr. Ralph V. Pausina and Mr. Mike Voisin, Louisiana Oyster Task Force (LOTF)

LOTF 01 (Continued)

To control costs, this process starts in a portion of a lease. To enlarge the producing area within a lease a full time, high investment procedure must be implemented. This building process consists of utilizing shell from dead oysters as well as young oysters separated and graded during the harvesting for market operation. Further information is available from the Sea Grant Seafacts LA publication, "Farming Oysters".

What we are trying to describe is a cultivating or farming operation as opposed to simply catching what Nature may or may not have made available. We lease waterbottoms to become a part of an overall operation. Without the expense of leasing, surveying, marking, stabilizing, de-silting, planting, replanting, relaying there would be no oysters to harvest and maintain a profitable business. See pages 5, 6, and 7 of the attached Information Briefing Book for further information. Also see the information about the de-silting process used by leaseholders in the LA Oyster Story, LA Dept of Wildlife and Fisheries. Education Bulletin # 32.

The Information Briefing Booklet also notes that the very purpose for establishing an oyster leasing program by the state of Louisiana was to encourage investment in the State's barren and otherwise worthless waterbottoms, as well as to protect oyster families from losing their investment in constantly stabilizing, repairing, marking, planting, replanting, relaying, and harvesting.

Also in the third sentence of the first paragraph the statement that "there is midterm termination clause" puzzles us.

We read in the third paragraph that LDNR for LCA will acquire oyster leases. This will be done with the system in place based on the valuation set forth by the appraisal procedure developed within DNR and which is a part of LCA. The study further states that the lessee will execute a purchase agreement with the State. This purchase process includes a date for the termination of the lease. The lease then has a termination date weather it was in existence for 5 months or 13 years. This seems to be a midterm termination.

LOTF 02

Further, in Davis Pond all of the leases included in the Relocation Program were terminated within that program and no longer exist. All of those leases were in some stage of midterm. Here again we have a midterm termination in place.

We hope that our remarks will be given some weight, and help in the process of developing a complete and accurate Study, which fairly states the facts as correct.

If you need any further information please contact me at any time. We thank you for the opportunity to voice our opinion.

LOTF 02: It is the understanding of the USACE that the oyster lease sets forth an irrevocable fifteen-year term. As such, the state cannot terminate the lease in the middle of a term without just compensation. The termination could only be effected if the oyster lease is acquired, e.g., through conventional closing, whereby the leaseholder receives just compensation for the lease and signs a release of liability.

Letter 45: Mr. Ralph V. Pausina and Mr. Mike Voisin, Louisiana Oyster Task Force (LOTF)

Ralph V. Pausina
Chairman, Coastal Restoration Committee

Mike Voisin
Chairman, Oyster Task Force.

Letter 46: Honorable Walter J. Boasso, Louisiana State Senate (WJB)

SENATE
STATE OF LOUISIANA

WALTER J. BOASSO
State Senator
District 1

100 Intermodal Drive
Chalmette, Louisiana 70043
(504) 270-9258
Toll Free 1(866) 926-2776
Fax (504) 277-0113

COMMITTEES:
Retirement, Vice Chair
Agriculture, Forestry, Aquaculture & Rural Development
Transportation, Highways, and Public Works

July 26, 2004

Dr. William P. Klein, Jr.
CEMVN-PM-RS
P.O. Box 60267
New Orleans, LA 70160-0267

-and-

Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on Draft Programmatic EIS (DPEIS) and Draft Study Report on LCA Ecosystem Restoration Study

Dear Dr. Klein and Mr. Axtman:

WJB 01

I am writing you to express my generalized support for the U.S. Army Corps of Engineers (New Orleans District) project that will ultimately build rock breakwaters along the north bank of the Mississippi River Gulf Outlet (MRGO) and along the southern shoreline of Lake Borgne.

Such man-made yet natural barriers will indeed help serve to protect the coastal needs of St. Bernard and St. Tammany parishes. However, I must be quite frank in urging that under no conditions should the ultimate goal of prompt closure of the MRGO to deep-draft vessels be ignored.

I applaud the cooperative work of all agencies involved in getting the needed federal funds for this shoreline stabilization project, and ask that these same agencies fully channel their energies into helping our St. Bernard Parish President, our St. Bernard Parish Council and our St. Bernard Parish delegation to the Louisiana legislature implement the most efficient (in both time and in cost) ways to have the MRGO rendered obsolete.

With best regards,

Walter J. Boasso

WJB/kwt

WJB 01: Comment noted. Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 47: Dr. Steven Hall, Louisiana State University (SH)

St. Bernard Mtg - 7 / July 04

DRAFT LOUISIANA COASTAL AREA (LCA)
LOUISIANA ECOSYSTEM RESTORATION STUDY
Request for Public Comments

(CD)

Comments: WOULD LIKE A COPY OF FULL DOCUMENTS (LCA TSP)

WHAT ARE EXPECTED IMPACTS ON AQUACULTURE/OYSTERS/FISHERIES? SH 01

SH 02 WHAT STUDIES ARE/WILL BE DONE ON PLANT/ANIMAL GROWTH IN DREDGED SEDIMENTS?

NAME: STEVEN HALL, PhD
Affiliation: LSU
STREET: 143 E.B. DORAN STADIUM DR.
Phone: 225-767-5307
CITY, STATE, ZIP: BATON ROUGE, LA 70803
FAX:

SH 01: Potential LCA Plan project-induced impacts to fisheries and oysters are discussed in Section 4 under Fisheries Resources in the FPEIS.

SH 02: The LCA Plan, as presented, does not currently specify any such activities. There is ongoing monitoring of dredged material placement for wetland creation under the CWPPRA program. The S&T Program proposed under LCA will establish the needs and requirements for additional restoration monitoring and research.

Letter 48: Mr. William L. Jenkins, Louisiana State University (LSU)

Louisiana State University System
3810 West Lakeshore Drive
Baton Rouge, Louisiana 70808

Office of the President

225 / 578-2111
225 / 578-5524 fax

August 23, 2004

Mr. Tim Axtman
U.S. Army Corps of Engineers
Planning, Programs and Project Management Division
CEMVN-PM-C
P.O. Box 60267
New Orleans, Louisiana 70160-0267

REFERENCE: Draft Programmatic Environmental Impact Statement (DPEIS) and
Draft Louisiana Coastal Area (LCA) – Ecosystem Restoration Study Report

Dear Mr. Axtman:

LSU 01

I know personally from my role on the Governor's Commission that restoring our coast is a threshold survival issue for our state and an ecological imperative of international significance. It is also a top priority for the Louisiana State University System. In reviewing the documents referenced above, I was pleased to see that the researchers and resources of Louisiana's higher education institutions played such a prominent role in providing the technical rationale for action on the large-scale. It was also heartening to see that Appendix A of the DPEIS calls for continuing and building upon this role as the plan becomes a reality. I refer specifically to the following passage on page 27 laying out the vision for a Science and Technology Director and Office:

> "The office of the Director should be a centrally located area of activity in Louisiana. The State recommends the Louisiana State University and A&M campus in Baton Rouge as the site of this office. This flagship university location is an appropriate site to best coordinate and execute the S&T Program."

I want to assure everyone who will review these documents and pass judgment on the merits of this plan that Louisiana's universities, and particularly the Louisiana State University System, are solidly in support of the restoration initiative outlined in this proposal. Further, we are committed to providing whatever space, resources and creativity are necessary to ensure that the Science and Technology Office envisioned in this plan is well-supported and credible so that the adaptive management vision laid out in the DPEIS and overall LCA plan can succeed.

Sincerely,

William L. Jenkins
President

LSU 01: Comment noted.

Letter 49: Mr. E.R. "Smitty" Smith, III, Louisiana Wildlife Federation (LWF)

LOUISIANA WILDLIFE FEDERATION

"...conserving our natural resources and your right to enjoy them."

affiliated with NATIONAL WILDLIFE FEDERATION

20 August 2004

U.S. Army Corps of Engineers
Attn: Dr. William P. Klein, Jr.,
Mr. Timothy Axtman
New Orleans District
P.O. Box 60267
New Orleans, LA 70160

Re: Comments on the Draft LCA Ecosystem Restoration Study and Programatic Environmental Impact Statement

Dear Dr. Klein and Mr. Axtman:

The Louisiana Wildlife Federation (LWF) has a long-term interest in the loss of Louisiana's coastal ecosystem, one of the natural wonders of the nation and, indeed, the world. Since the early 1970's we have urged and supported steps to reconnect the Mississippi River to the marshes and swamps it created with the understanding that the rich abundance of fish and wildlife resources, the foundation of the cultural and economic development of South Louisiana, depended on the success of those efforts. Here we are, some 30 years later, embarking on another phase of planning, funding, implementing, monitoring and investigating. We are impatient with the process, but recognize the task and resources at stake are immense. We commend you and your partners in completing the draft Louisiana Coastal Area (LCA) Near Team Plan and accompanying Environmental Impact Statement. The following represents our comments concerning those documents. We have divided them into General Comments and Specific Comments by document.

I. GENERAL COMMENTS

LWF 01

a. We strongly believe that the Small Bayou Lafourche Reintroduction Project, as proposed, does not meet the criteria of addressing critical ecological needs and cost effectiveness. More justification should be given to address its "critical" nature, relative to its scale and projected outcome. However, reestablishment of significant flows through Bayou Lafourche is crucial and should be evaluated for future implementation.

LWF 02

b. We strongly urge that a plan to close the Mississippi River-Gulf Outlet Canal (MRGO) be developed as recommended by the Coast 2050 document. The plan should address the needs of navigation and the environment, and funds proposed in the Near Term Plan should be viewed as support for initiating a project that will ultimately effect the closure of the MRGO to deep draft navigation.

LWF 03

c. Concerning the Science and Technology (S & T) Program, we believe that: (1) scientists should be able to work jointly with the Program Management Execution Team to ensure proper feedback for adaptive management; (2) the S & T Program should also work jointly with other science programs in the State and provide support to those entities if it assists in the implementation of projects; and (3) a data management system using the

337 S. Acadian Thruway, Baton Rouge, LA 70806
P.O. Box 65239 Audubon Station, Baton Rouge, LA 70896-5239

Phone/Fax: (225) 344-6707
www.lawildlifefed.org

LWF 01: Based on the evaluation of projected project impacts and feasibility, the reintroduction at Bayou Lafourche meets both the sorting and critical needs criteria. The relative level of cost to beneficial output may be somewhat high in the case of this project. This is not uncommon in the case of areas in critical need. Typically, steps have not been previously taken to address restoration in these areas for that very reason. However, in the larger context of determining the initial steps required to begin an effective restoration of the entire coastal system, the USACE has been directed to address these critical needs. The description of this feature has been updated and amended to increase the clarity of this need.

LWF 02: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

LWF 03: Coordination and cooperation are important components of the S&T Program, as explained in Appendix A. Data management systems and standards will be developed as an early action by the S&T Office. Public outreach regarding the activities of the S&T Program will be incorporated into the community relations effort for the LCA Plan; however, appropriate security will be implemented and maintained for raw data and interim work products of the S&T Program, consistent with the Freedom of Information Act and other requirements for data management and public access.

Letter 49: Mr. E.R. "Smitty" Smith, III, Louisiana Wildlife Federation (LWF)

LWF LCA comments, Page 2

Internet needs to be developed that will keep the general public informed of the progress and status of the LCA Restoration Program.

d. Although these documents reflect a Near Term Plan, we urge the Corps and the State of Louisiana to complete by 2008 a comprehensive restoration plan. This plan should include the results of all proposed large scale feasibility studies and how the Coastal Wetlands Planning Protection, and Restoration Act (CWPPRA) program, and existing and proposed public works would be utilized. LWF 04

e. The LWF strongly supports the proposed increase in funding for the beneficial use of dredge material program, with consideration for continuation of funding beyond the proposed 10-years of the Near Term Plan. LWF 05

f. Why isn't the modification of Caernarvon and Davis Pond diversions for marsh creation under near - term critical features? Can't a reauthorization or modification of these diversions be included in this Programmatic Authorization? These features have great potential based on the success we have seen from their operation thus far. LWF 06

g. We question the assertion that Pipeline Sediment Delivery lacks sufficient scientific and engineering understanding. Can you elaborate as to why this is the case. After reviewing the testimony of Mr. Kerry St. Pe' of the Barataria - Terrebone National Estuary Program, we believe that the report needs to address his concerns. We strongly recommend that the use of offshore sources of sediments for barrier island restoration and pipeline canal restoration or closure, with pipeline delivery, be the top Science and Technology Program Demonstration Projects. LWF 07

h. Losses are among the highest in the Terrebonne marshes. If projects to address this cannot be included in the Initial Near - Term Critical Restoration Features, they (Houma Navigation Canal Lock and Atchafalaya River Water Conveyance) should be at the top of the list for Standard Authorizations. LWF 08

i. These documents do not give adequate description of how changes in the Mississippi River watershed have had an influence on wetland loss in Louisiana. The documents suggest that the problems are due to activities in coastal Louisiana, which is only a part of the problem. Dams, channelization and other hydrologic changes in the Mississippi Basin have dramatically altered the flow of fresh water and sediment into the coastal zone. The document does not adequately address integrated planning with other activities in the Mississippi River watershed which are needed to remedy the problem of coastal wetland loss in Louisiana. All actions are proposed in the coastal zone and there are no linkages with activities in the upper watershed to reduce coastal wetlands loss. This is a major short coming of the Near Term Plan. LWF 09

LWF 04: Please see General Response #6 regarding the relationship of CWPPRA and LCA.

LWF 05: Comment noted.

LWF 06: Both these features have been included in the LCA Plan as near-term critical features, based on the projected benefits for preventing land loss, restoring deltaic function, and improving resources such as fin and shell fisheries. The type of authorization process proposed for the restoration features was determined based on the lack of a clear understanding of what specific changes or modifications would be proposed at this time. In addition, if the changes would alter the current project purposes of salinity management then a specific reauthorization of the projects by Congress would be required. If the changes do not significantly alter the currently authorized purpose than those changes fall within existing authorities and would not require Congressional approval. Inclusion of the Davis Pond and Caernarvon features as standard authorization features reflects the ability of these projects to provide benefits that meet the plan requirements, but that can be implemented on a more intermediate time scale than the programmatic features without loss of significant resources.

LWF 07: Comment noted. Please see General Response #9 regarding sediment transport via pipeline.

LWF 08: Comment noted. Multipurpose Operation of the Houma Navigation Canal Lock is currently prioritized as the first component for standard authorization (or the sixth of the fifteen LCA Plan components). The LCA Plan component for conveyance of Atchafalaya River water to northern Terrebonne Parish marshes is currently prioritized as the eighth component for Congressional authorization (or the thirteenth of the fifteen LCA Plan components).

Letter 49: Mr. E.R. "Smitty" Smith, III, Louisiana Wildlife Federation (LWF)

LWF LCA comments, Page 3

j. Any coastal restoration program cannot succeed separate from the application of reasonable regulations that ensure the consistency of public and private projects and activities with the goals of restoration. All such projects/activities that might impinge on restoration goals should be reviewed for consistency and, through existing or new authority, modified or prohibited to assure that restoration goals are met. LWF 10

A. MAIN REPORT COMMENTS

LWF 11 Page MR - 24, last paragraph & 31, second paragraph - "The coastal area marshes were formed over the last 7,000 years." Have any studies been done to determine sediment load and grain size over the almost 7,000 years before the plow was put to the plains?

Page MR - 26, second paragraph - There is no mention of weirs and water control structures. Based on data by Dr. Bill Herke, he estimated that 250,000 acres were controlled by such structures in the 1980's, and this did not include such areas as Cameron-Creole. LWF 12

LWF 13 Page MR - 94, third paragraph & 98 second paragraph - Benefit to Cost (B/C) analysis for the Chenier Plain should include an assessment of the fauna utilizing the preserved acres. This will better reflect the benefits, since some acres will be more valuable to fauna and hence provide a higher benefit than others.

Page MR - 122, regarding Cameron-Creole structures - Instead of just lowering weir sills, consideration should be given to building small structures with slots from top to bottom that could be closed incrementally with vertical stop logs so the amount of flow could be adjusted as experience dictates. LWF 14

LWF 15 Page MR - 161, second paragraph - We found no clear definition of what a "habitat unit" is. It must be defined early on in the document.

Page MR - 173, second paragraph - What two barrier islands are being referenced here? LWF 16

B. DPEIS COMMENTS

LWF 17 Page DPEIS - 1-16, last paragraph - Same comment as main report pages 24 and 31 above.

In closing, we appreciate the opportunity to review these documents and look forward to working with you in the implementation phase.

Sincerely yours,

E. R. "Smitty" Smith, III
President

LWF 09: Although not extensively discussed, on page MR–31, the report does point out that the suspended sediments in the river are a critical component in land building in the deltaic process and that suspended sediments in the river have decreased over time due to the reasons pointed out in the above comment. The proposed restoration features in the LCA Plan take into account the past ten-year average sediment concentration in making projections for the land building capabilities for the river diversion plans.

LWF 10: The "Consistency of the LCA Plan with other Efforts" section describes finding balance between economic development and coastal restoration and protection and the need for consistency between the LCA Plan and regulatory programs, hurricane protection, and navigation.

LWF 11: The statement referred to by the commenter was not found on the referenced page. Boring data throughout the deltaic plain of Louisiana indicates that most of the material transported and deposited by the Mississippi River over the past several thousand years is clay and silt with lesser quantities of fine sand. The marshes themselves are mainly composed of organics, as explained in Section 2 of the Main Report.

LWF 12: Comment noted. The appropriate section has been revised accordingly.

LWF 13: The benefits analysis carried out for each framework during the plan formulation process uses several categories of benefits as outlined in Section 3 of the LCA Main Report. One of these categories is habitat use. For habitat use, the value of each marsh habitat type is assessed for habitat suitability. This assessment includes valuation of habitat based on faunal suitability.

Letter 49: Mr. E.R. "Smitty" Smith, III, Louisiana Wildlife Federation (LWF)

LWF 13 (Continued): However, low wetland loss rates coupled with the majority of the proposed actions in Subprovince 4 involving the stabilization of existing conditions, produced very little change in habitat suitability making this a poor measure of performance. Instead, net land gain was used in this subprovince as a key indicator of restoration success. More information regarding the models, and the benefits protocols can be found in Hydrodynamic and Ecological Modeling appendix.

LWF 14: Although this feature was not selected as an element of the LCA Plan, the operability of the structures would be a consideration for future decision-making and NEPA documents prior to final construction approval.

LWF 15: The appropriate definition has been included and the section has been revised accordingly.

LWF 16: The reference to barrier islands was an editorial mistake and has been removed.

LWF 17: Please see response to LWF 11.

Letter 50: Mr. Samuel Manisialio (SGM)

DRAFT LOUISIANA COASTAL AREA (LCA)
LOUISIANA ECOSYSTEM RESTORATION STUDY
Request for Public Comments

SGM 01

Comments: I attended the "Corps: meeting on 7-27-2004 at Chalmette,La. It didn't sound like the corps is planning on settling the MRGO to me. Nothin; was said about closing. The MRGO should be closed for all our safety in St. Bernard & Orleans parishes. Did I miss something????

NAME: Samuel D. Manisialio
Affiliation: —
STREET: 417 chinchilla Dr
Phone: 1-504-271-4581
CITY, STATE, ZIP: Arabi,La. 70032
FAX: 271-4581

SGM 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 51: Mr. Doug Daigle, Mississippi River Basin Alliance – EIS (MRBA-EIS)

Mississippi River Basin Alliance
P.O. Box 4268
New Orleans, La. 70178

August 23, 2004

Mr. William Klein
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Environmental Planning and Compliance Branch
CEMVN-PM-RS
P.O. Box 60267
New Orleans, La. 70160-0267

Dear Mr. Klein,

I am submitting the following comments on the LCA Draft Programmatic Environmental Impact Statement (DPEIS) on behalf of the Mississippi River Basin Alliance (MRBA), a non-profit organization dedicated to the protection and restoration of the health of the river system and the communities who depend on it. We recognize and appreciate the challenge involved in constructing a comprehensive restoration plan for Louisiana's coast.

MRBA-EIS 01

As an initial comment, I must point out that the summary of MRBA's scoping comments (p.5-14) misrepresents those comments. MRBA did not call for the completion of the Inner Harbor Navigation Canal prior to the 2013 deadline. We did state that delaying closure of the Mississippi River Gulf Outlet (MRGO) until the projected 2013 completion date of the IHNC lock expansion is an unacceptable position for the Corps to take.

MRBA-EIS 02

We stated in our scoping comments that a 10-year horizon for what we and many in the state hope would be the initial installment of large-scale appropriations represented by the current LCA plan carries a risk, which is that the real scope of the coastal problem in Louisiana, widely estimated to have something like a 50 year horizon (for successful restoration) will be lost within the competing parties and priorities in the appropriations process. While the current plan would provide a significant increase in resources compared to previous levels of spending, the time-frame for authorization of programmatic authority for the selected "near-term critical restoration features", in which construction can begin within 5 to 10 years, is still out of scale with the immediacy of the coastal crisis in Louisiana.

MRBA-EIS 03

The Introduction in Chapter 1 summarizes the convergence of trends that are exacerbating that crisis. It seems appropriate in the section on "Relative Sea level Change" to mention the primary driver of the projected increase in sea-level rise, which is global climate change. This issue has implications for the state of Louisiana which are at first glance outside the purview of the LCA, since the state is a significant source of global greenhouse gas emissions, but those implications could affect the LCA and

MRBA-EIS 01: The summary of the MRBA-EIS's comments has been revised to better reflect the intent of their scoping comment letter. "It is unacceptable for the USACE to delay closure of the MRGO until the projected 2013 completion date of the Inner Harbor Navigation Canal lock expansion."

MRBA-EIS 02: Please see General Response #5 regarding the 10-year planning horizon.

MRBA-EIS 03: The current trends in global climate, while certainly relevant to the objectives of the LCA Plan, are not a wholly unnatural process in the coastal ecosystem. These trends are also not unlinked to the formulation of the solutions identified in the LCA Plan. As a component of historic and ongoing loss, these trends are incorporated in a manner similar to the discreet loss caused by extra tropical storm events. Since the planning objectives stated for the study are directed toward restoration of overall system functions, it is expected that the methodology applied in the study effort would account for the best solutions to address a composite loss trend over a relatively extended time frame. Restoration efforts that restore hydrologic functions for surface waters would also help arrest or mitigate impacts of salt water migration into aquifers.

Letter 51: Mr. Doug Daigle, Mississippi River Basin Alliance – EIS (MRBA-EIS)

3A – LCA DPEIS Comments - 2

MRBA-EIS 03 (Continued)

ɔration efforts in a circular fashion. The impacts of coastal land loss on groundwater urces, such as coastal aquifers (section 4.13.4.1, p. 4-76), will also be exacerbated by level rise.

MRBA-EIS 04

ıe sections on Hypoxia (1.5.2.1.7 and 3.16), the primary policy vehicle for addressing problem, the *Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the thern Gulf of Mexico* (2001) should be cited. The Action Plan will allow upriver reductions in nutrient inputs to the Mississippi River that can at least help to alleviate concerns about the impacts of diversions/reintroductions on water quality in coastal basins. A significant portion of those reductions can be achieved on a faster time frame than many restoration projects, if the Plan is implemented more aggressively and resources are targeted for maximum results.

MRBA-EIS 05

ction 4.21 highlights the problem of hazardous, toxic, and radioactive waste sites in the astal zone. These sites pose increasing risks from inundation from storm surge, as well their increasing vulnerability to inundation from erosion and sea-level rise. We support call for an inventory of these sites and increased efforts at remediation. The large mber of such sites across the coastal zone also buttresses the need for sediment testing beneficial use of dredge material.

MRBA-EIS 06

The section on Forestry in the Coastal Zone (3.23.12) should mention the serious questions of ecological and economic sustainability that coastal land loss poses for these systems that are cited in section 4.22.12.. Changes in hydrology have made a number of cypress areas unable to regenerate, which has implications for the ecosystem should they be harvested. While forests in the coastal zone have not been the most economically significant in the state for some time, they are currently threatened by a market trend in landscape cypress mulch, and several companies from out of state are poised to carry out extensive logging of cypress forests in the coastal zone. Governor Blanco has appointed a Science Working Group to assess these issues and make recommendations, which could be incorporated into the LCA process.

MRBA-EIS 07

ctions 4.22.10 and 6.2.3.3 raise one of the most pressing problems facing Louisiana – creasing vulnerability to hurricane damage and flooding. The need to upgrade levees ch as those along the south shore of Lake Pontchartrain and those that protect the West ınk in New Orleans suggest that a prioritization process is needed, so that efforts to rectly protect lives and property do not continue to languish due to lack of funding.

MRBA-EIS 08

we appreciate the emphasis put on the need for consistency of the LCA with other plans and programs (section 6.2). While there needs to be a "balance" between restoration and development, there also needs to be a decision-making process that works from a realistic appraisal of the trends underway, as well as basic enforcement of laws such as the Clean Water Act. Adequate funding of the regulatory branch in the Corps of Engineers District Office will be necessary for the latter to occur and for consistency efforts to be successful. The need for consistency directly relates to the increasing vulnerability to

MRBA-EIS 04: Modifications have been made to the FPEIS to include a reference to the Action Plan. However, it would be speculative at this point to discuss any potential effects that implementation of the Hypoxia Action Plan might have relative to potential water quality issues associated with river reintroduction, because there is considerable uncertainty regarding: (1) the extent to which the Action Plan will be implemented in the future; and (2) the extent to which the proposed river reintroduction projects could indeed result in adverse water quality impacts in receiving areas. Additional resources would support a more robust regulatory program. All permit requests are evaluated in accordance with existing laws, regulations, and guidance.

MRBA-EIS 05: Please see General Response #12 regarding hazardous substances in Beneficial Use materials. Furthermore, identification of major HTRW sites has been included in the FPEIS. It is not within the purview of the LCA Plan to remediate HTRW sites.

MRBA-EIS 06: This issue will be addressed in more detail in the project-by-project implementation process. Additionally, individual projects implemented under the LCA Plan will be required to comply with applicable environmental compliance and permitting programs. The approval of the proposed LCA Plan would provide a basis for environmental consistency for all subsequent water resources related activities in the study area. This would not, however, in any way supercede the valid existing rights of landowners and leaseholders under existing statues.

MRBA-EIS 07: The purpose of the LCA Plan is to develop measures to protect or restore the vital ecosystem of the Nation. It is understood that human needs are intrinsic to the overall purpose of restoration. However, protection of investment via levees is best managed through flood control authorization.

Letter 51: Mr. Doug Daigle, Mississippi River Basin Alliance – EIS (MRBA-EIS)

MRBA – LCA DPEIS Comments - 3

hurricanes referred to above. Section 6.2.3.3 states that "many communities in coastal Louisiana are very much in need of increased hurricane protection." Yet development that puts more people in harm's way continues to be permitted. We support the idea that where possible, hurricane protection levees should complement wetland protection efforts (section 6.2.3.3). This complimentary function will involve in most cases leaving wetlands outside the levees to carry out their flood retention functions.

MRBA-EIS 08 (Continued)

The range of challenges facing coastal Louisiana raise a number of pressing questions of sustainability. We hope that the LCA plan helps to move the state to deal more effectively with those questions, as we continue to work for comprehensive coastal restoration.

Sincerely,

Doug Daigle
Lower River Program Director

MRBA-EIS 07 (Continued): The LCA Plan does, however, point to areas of greatest land loss and the impact this loss has on the vulnerability of investments. This information can be used to help prioritize flood control efforts.

MRBA-EIS 08: Please see General Response #4 regarding the coordination roles for agencies and local governments in the LCA Plan. In addition, please see response to MRBA-EIS 06. In addition the coordination and consistent development of hurricane protection along with wetland restoration actions is critical to the overall objectives of coastal restoration. Those objectives include a diverse and functionally sustainable ecosystem, both from an environmental and human-use perspective. A clearly stated concern of the public continues to be protecting the presences of users, in the form of communities and water resources related business, in and near the areas where water and ecosystem related opportunities exist. Because wetland restoration does not represent a complete form of protection from potential storm damages, these two coastal actions must perform in harmony to best meet long-term coastal objectives.

Letter 52: Mr. Doug Daigle, Mississippi River Basin Alliance – Main Report (MRBA-MR)

Mississippi River Basin Alliance
P.O. Box 4268
New Orleans, La. 70178

August 23, 2004

Mr. Tim Axtman
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
CEMVN-PM-C
P.O. Box 60267
New Orleans, La. 70160-0267

Dear Mr. Axtman,

I am submitting the following comments on the Louisiana Coastal Area (LCA) Draft Ecosystem Study Report on behalf of the Mississippi River Basin Alliance (MRBA). MRBA is a non-profit organization dedicated to protection and restoration of the health of the river system and the communities who depend on it.

General comments

MRBA-MR 01

We concur with the imperative for restoration of Louisiana's coast stated in the Executive Summary (p.iii): "The past and continued loss of Louisiana's coastal wetlands will significantly affect the ecology, society, and economy of the region and the Nation." The present LCA study plan reflects a tension between the federal processes for assessment, authorization, and appropriation of resources for implementation of projects and other actions, and the growing seriousness of the coastal situation in Louisiana. This tension is reflected in the areas of controversy raised by some stakeholders and members of the public in coastal Louisiana (p.xv) over near-term versus long-term restoration efforts and the demand for immediate construction of projects versus the need for adequate study of restoration problems and processes.

MRBA-MR 02

The Tentatively Selected Plan, with five near-term critical restoration features selected for implementation through programmatic authority, is said to "address the most critical ecological needs of the coastal area in locations where delaying action would result in the loss of opportunity to achieve restoration and/or much greater restoration costs."(p.viii). Yet the authorization of programmatic authority for the current version of the LCA plan looks for features "for which construction can begin within 5 to 10 years subject to follow-up feasibility-level decision documents" (Sec. 1.3, p.MR-4).

While this time-frame may reflect a reasonable working plan for the standard appropriations process, it does seem at odds with the urgency of the situation in coastal Louisiana. The context of crisis makes management and implementation of a challenging program even more challenging, but it also reflects the reality of a pressing problem. One of the key needs that has been identified by several groups, including the Governor's

MRBA-MR 01: Comment noted.

MRBA-MR 02: Please see General Response #5 regarding the ten-year planning horizon and General Response #10 regarding proposed LCA funding. Furthermore, while a five to ten year time frame may appear to be at odds with the intent of addressing needs that could result in loss of opportunity if action is delayed, the resources available to complete the USACE Planning Process are limited. The five near-term critical projects reflect those that can be implemented most quickly based on previous studies. The follow-up feasibility-level decision documents for these projects will be started following conditional authorization.

Letter 52: Mr. Doug Daigle, Mississippi River Basin Alliance – Main Report (MRBA-MR)

MRBA – LCA comments – 2

Commission, is the ability to accelerate the funding and completion of restoration projects on a scale that may be unprecedented. MRBA-MR 02 (Continued)

While there are a number of scientific and technological uncertainties about large-scale restoration projects such as those being undertaken in Louisiana (as examined in section 3, where they are referred to as "aquatic" restoration projects, but perhaps are better termed "deltaic"), the report notes that "the numerous state-sponsored studies generated from CWPPRA have developed basic trend information over the past 14 years." MRBA-MR 03

Issue-Specific Comments

Hypoxia

Section 2.1.1.2 (p.MR-22) correctly identifies hypoxia as a significant environmental problem affecting the northern Gulf of Mexico. The section heading may lead some readers to incorrectly assume that hypoxia is a cause of coastal land loss, in addition to being a major example of ecosystem degradation. The figures given in paragraph 3 of section 2.1.1.2 for the size and growth trend of the hypoxic should be updated with more recent data, such as that shown in the chart on page MR-23. MRBA-MR 04

Section 2.3.3.4 mentions that diversions and other restoration problems should result in nutrient uptake, but seems to suggest that no reliable data exists for this question, and that the LCA plan will mainly provide an opportunity to study this potential, as well as any negative effects of such projects. While precise figures may not yet be available for the degree of nutrient uptake that restoration projects could achieve, it is clear that the continued combination of marsh loss and offshore hypoxia is putting coastal fisheries at greater risk, a consideration which could be emphasized in the "Future without-project conditions" projection for commercial fishing in Louisiana in section 2.2.3.3. (p.MR-54). MRBA-MR 05

The key policy vehicle for addressing hypoxia, the *Action Plan for Mitigating, Reducing, and Controlling Hypoxia in the Northern Gulf of Mexico* (2001), is not mentioned in section 2.1.1.2, but should be prominently cited as the basin wide effort currently underway to deal with this problem (it is cited in section 2.3.3.4). The importance of the Mississippi River Basin for coastal Louisiana is cited on page MR-29. The *Action Plan* engages the critical parts of the Mississippi River basin in terms of nutrient loading, but could also facilitate similar efforts to address sediment issues. MRBA-MR 06

Sea-Level Rise and Climate Change

Section 2.1.1.5 refers to "Relative sea level change" and gives estimates for its acceleration over the next 50 years without mentioning the driver of this projected rise, which is global climate change. Since Louisiana is a significant source of greenhouse gas emissions, the relation between climate change and sea-level rise is an important one for the state. Sea-level rise and climate change in general have other important implications MRBA-MR 07

MRBA-MR 03: Comment noted.

MRBA-MR 04: Concur, the heading could be misinterpreted. Accordingly, the following sentence has been added: "While hypoxia is not a cause of land loss in coastal Louisiana, it is highly relevant to the broader coastal Louisiana ecosystem." Also, the text has been updated for consistency and recent data is included. Accordingly, the text has been updated as follows: "For the period between 1985 to 2001, the bottom area of the hypoxic zone ranged from 2,730 to over 7,700 mi^2 (7,070 to over 20,000 km^2)."

MRBA-MR 05: There is data that indicate that river reintroduction projects could provide valuable opportunities to remove nutrients. However, the language at issue is referring to the need for further information on ways to maximize nutrient uptake, while also meeting the primary restoration needs and avoiding potential adverse effects. Text has been revised to include a discussion of hypoxia.

MRBA-MR 06: Concur. Citation has been included in the FPEIS.

MRBA-MR 07: Along the Louisiana coast, both changes in water level and changes in land elevation are occurring. Relative sea level change is the term applied to the sum of the change in eustatic sea level and the change in land elevation. Land elevations decrease due to subsidence from compaction and consolidation of sediments, faulting, and groundwater depletion. Recent studies have shown that subsurface fluid (e.g., oil and gas) withdrawal may also be a contributor, but the magnitude of its contribution is not well understood (Morton et. al. 2002). Land elevations increase due to sediment accretion from riverine and littoral sources and organic deposition from vegetation. Accelerated global sea level change has also been attributed to global climate change by the Union of Concerned Scientists.

Letter 52: Mr. Doug Daigle, Mississippi River Basin Alliance – Main Report (MRBA-MR)

MRBA-MR 07 (Continued): For most of coastal Louisiana, sediment accretion is insufficient to offset subsidence, and as a net result land elevations are decreasing.

Changes in land elevation vary spatially along coastal Louisiana. In areas where subsidence is high and riverine influence is minor or virtually non-existent, such as in areas of western Barataria Basin and eastern Terrebonne Basin, wetland habitats may sink and convert to open water. Estimated subsidence rates for the Deltaic Plain are between 0.5 to 4.3 feet/century (0.15 to 1.31 meters/century) and between 0.25 to 2.0 feet/century (0.08 to 0.61 meters/century) for the Chenier Plain.

Taking into account changes in land elevation and water levels, the average rate of relative sea level change along coastal Louisiana is currently estimated to be between 3.4 to 3.9 ft/century (1.03 to 1.19 meters/year).

Sources: National Oceanic and Atmospheric Administration, 2001, NOAA Technical Report NOS CO-OPS 36, Sea Level Variations of the United States, 1854-1999.

James G. Titus, Vijay K. Narayanan, 1995, Environmental Protection Agency, EPA 230-R-95-008, The Probability of Sea Level Rise.

James G. Titus, Vijay K. Narayanan, 1996, Environmental Protection Agency, The Risk of Sea Level Rise: A Delphic Monte Carlo Analysis in which Twenty Researchers Specify Subjective Probability Distributions for Model Coefficients within their Respective Areas of Expertise.

Letter 52: Mr. Doug Daigle, Mississippi River Basin Alliance – Main Report (MRBA-MR)

MRBA – LCA Comments – 3

MRBA-MR 07 (Continued)

for coastal Louisiana, such as increased salinity of coastal aquifers, inundation of the many toxic waste sites in the coastal zone, and exacerbation of vector-borne diseases from the mosquito population in coastal communities.

Coastal Forests

MRBA-MR 08

Section 2.2.3.4 ("Agriculture") refers to timber production in Louisiana's forested wetlands as "an important renewable resource" without mentioning either the problems caused by hydrological changes that are affecting many of the states' coastal forests, or the concurrent controversy over potential accelerated cypress logging in the coastal zone. The sustainability of these forests, in both the ecological and economic sense, has been put in question by these changes, and is currently being assessed by a Science Working Group appointed by Governor Blanco. The "bottomland hardwood forests in southern Louisiana" may refer to a broader region than the coastal zone, but this is not clear. Also, the figure of $10 billion for annual economic return of these forests to the state's economy needs to be checked.

Beneficial use of dredged materials

MRBA-MR 09

Section 2.3.3.2 and subsequent sections on the beneficial use of dredged materials need to mention the need for sediment testing. Louisiana's pervasive mercury problem and the number of waterways with contaminated sediments make such testing a necessity in order to ensure that marshes and bays do not receive influxes of heavy metals and other contaminants.

Coastwide monitoring system

MRBA-MR 10

We strongly support the proposal for a coastwide system of monitoring stations in section 3.1.2.1 (p.MR-70). A key factor for success in this effort will be interagency and inter-university cooperation, and avoidance of competition.

MRBA-MR 11

'ediment delivery via pipeline

'he delivery of sediment via pipelines has an advantage in time considerations, i.e., it ould be implemented more quickly than diversions and a number of other kinds of estoration projects. Issues about the placement of sediment, as well as the need for ediment testing and avoidance of depositing saline sediment in fresh areas, would all ave to be addressed. The Sorting and Needs Criteria in Section 3.4.2 (p. MR-131) seems eliminate possibilities for sediment delivery via pipeline in Subprovinces 1 and 2. But the time factor involved in their potential implementation suggests that they should be considered as near-term courses of action for restoration.

MRBA-MR 08: The $10 billion figure contained in the report had been mislabeled and appeared to be for Louisiana, when actually the figure represented annual hardwood forestry income for the U.S. The U.S. Census Bureau was contacted regarding the error in their report. The sentence has been deleted from the LCA Main Report and the FPEIS, and correct values are provided. The systemic and broader scale affects of restoration efforts will help support the sustainability of forest ecosystems, and the ecosystem effects and requirements for projects will be evaluated in the development of decision documents for each restoration feature implemented.

MRBA-MR 09: Sediments will be tested as appropriate on a project specific basis. Text has been revised to clarify. Furthermore, the Clean Water Act 404 (b)(1) Guidelines (40 CFR 230) are the environmental criteria for evaluating the proposed discharges of dredged or fill material into waters of the United States. Compliance with these guidelines is the controlling factor used by the USACE to determine the environmental acceptability of disposal alternatives. The USACE must demonstrate through completion of a 404 (b)(1) evaluation that any proposed discharge of dredged material is in compliance with the guidelines.

MRBA-MR 10: Comment noted.

MRBA-MR 11: Refer to MRBA-MR 09 for sediment testing response. The application of sorting criteria in the development of the LCA Plan resulted in the identification of a technical uncertainty regarding source material. The study team determined that the delivery of sediment to the coastal ecosystem should rely on renewable sources such as the Mississippi River or at least sources outside the system. Because there are potential limitations on the quantity and rates of renewal for these sources, the execution of multiple sediment delivery projects would need to be approached in a programmatic manner.

Letter 52: Mr. Doug Daigle, Mississippi River Basin Alliance – Main Report (MRBA-MR)

MRBA – LCA Comments - 4

Remediation of canals

The thousands of miles of canals cut through the coastal zone will continue to have an effect on the hydrology of existing marsh and the success of restoration projects. We support test projects on canal remediation to gain better understanding of both the techniques involved and the scale on which they could feasibly be undertaken. MRBA-MR 12

Mississippi River Gulf Outlet

MRBA-MR 13 The future of the Mississippi River Gulf Outlet (MRGO) appears to remain unresolved in the current draft LCA plan, and the "restoration" work proposed sounds mainly like improved maintenance through bank stabilization. While there are obvious benefits to preventing further widening of the MRGO, it has been clear for some time that "closure" – a significant modification to the operation and structure of the channel – is the only solution to the problems this waterway poses for Orleans, Plaquemines, and St. Bernard Parishes. If the freshwater reintroduction into the Central Wetlands relies on completion of the Inner Harbor Navigation Canal lock expansion to be implemented, that prospect also seems untenable as a reliable planning option.

Consistency and Coordination

As we and a number of organizations have pointed out, consistency between restoration efforts, regulatory activity, and public works projects is crucial for both credibility and success of the restoration program. The LCA plan seems to recognize this by stating that CWPPRA mandates consistency, that "project purposes such as hurricane protection, navigation, and economic development must be addressed in a way that is, at a minimum, consistent with coastal restoration and protection efforts," and that "despite efforts to address this important [issue]… a more thorough and comprehensive effort is needed to ensure consistency across the coast." (section 4.3, p. MR-191). MRBA-MR 14

While we agree with the statement that "the solution is neither a moratorium on growth in the coastal zone, nor 'business as usual'", it is important to note that coastal land loss, sea-level rise, and other trends may impose limits on growth in some coastal parishes. The Corps continues to permit growth reaching south in coastal parishes, even as the Gulf continues to move north, thus laying the groundwork for serious problems in the future. These questions need to be examined carefully by parish governments and federal agencies, since lives and property will be impacted by their decisions.

The success of LCA consistency efforts will depend directly on adequate funding for the regulatory branch of the COE and for the Interagency Group that will work to ensure consistency and coordination.

MRBA-MR 11 (Continued): In addition, study efforts are needed to address uncertainties related to effective sediment placement techniques for these types of restoration efforts. The river management modeling effort proposed as a first step for several of the Large-Scale Studies would need to be completed and a best use policy may need to be established in conjunction with the results of that study.

MRBA-MR 12: Comment noted and concur.

MRBA-MR 13: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

MRBA-MR 14: Refer to MRBA-EIS 08 comment response.

Letter 52: Mr. Doug Daigle, Mississippi River Basin Alliance – Main Report (MRBA-MR)

MRBA – LCA Comments – 5

We appreciate the opportunity to comment on this draft report.

Sincerely,

Doug Daigle
Lower River Program Director

Letter 53: Ms. Susan Kaderka, National Wildlife Federation (NWF)

People and Nature: Our Future is in the Balance
NATIONAL WILDLIFE FEDERATION
GULF STATES NATURAL RESOURCE CENTER
44 East Avenue, Suite 200
Austin, Texas 78701
(512) 476-9805
FAX (512) 476-9810
http://www.nwf.org
NATIONAL WILDLIFE FEDERATION
www.nwf.org™

August 23, 2004

Mr. Timothy Axtman
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Coastal Restoration Branch
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Dr. William P. Klein
U.S Army Corps of Engineers
Planning, Programs, and Project Management Division
Environmental Planning and Compliance Branch
CEMVN-PM-RS
P.O. Box 60267
New Orleans, La 70160-0267

Re: Comments on Draft LCA Ecosystem Restoration Study (ERS) and Programmatic Environmental Impact Statement (PEIS)

Dear Mr. Axtman and Dr. Klein,

The National Wildlife Federation (NWF) appreciates the opportunity to offer these comments on the long-awaited Louisiana Coastal Area Ecosystem Restoration Study and the related Programmatic Environmental Impact Statement. NWF is the nation's largest member-supported conservation organization, with more than 4 million members and supporters across the country. Along with our state affiliate, the Louisiana Wildlife Federation, NWF has long been concerned over the implications of Louisiana's coastal land loss for people and wildlife, both in Louisiana and throughout the country.

In recent years we have intensified our efforts to avert the ecological catastrophe that is certain to occur if this vast expanse of coastal wetland continues to disappear into the sea. NWF has served on the Governor's Advisory Commission on Coastal Restoration and Conservation since its inception and has worked to raise the profile of this issue with our own constituents, our colleagues in the conservation community, and decision makers and opinion leaders in Washington D.C. We are gratified that the U.S. Army Corps of Engineers has reached the point of recommending to Congress and the American public

Letter 53: Ms. Susan Kaderka, National Wildlife Federation (NWF)

the first phase of what must be a sustained, long-term, comprehensive plan to restore and rebuild America's Wetland.

While recognizing that the activities included in the LCA Study and PEIS represent only the first steps toward a sustainable coastal ecosystem, we generally support the proposed plan. In particular, we applaud the Corps' inclusion of the Guiding Principles compiled by the Project Development Team, which, among other things state the Corps' preference for "alternatives that mimic natural processes and rely on natural cycles and processes for their operation and maintenance," and recognize that "the rehabilitation of Louisiana's coastal ecosystem will be an ongoing and evolving process… [that] should include an effective monitoring and evaluation process that reduces scientific uncertainty, assesses the success of the plan, and supports adaptive management of plan implementation."[1] These principles appropriately acknowledge that this massive restoration effort must seek to re-balance the activities of the human community with the forces of nature and that it must do so with a healthy respect for the evolving nature of restoration science and engineering. NWF 01

NWF takes issue with several elements of the draft plan, in part because they contradict the very guiding principles articulated above. The comments below list and elaborate on our concerns.

Program Scope

NWF recognizes that the scope of the draft LCA Ecosystem Restoration Study now under review was largely driven by the guidance the Corps received in early 2004 from the White House and the Office of Management and Budget. It responds to the administration's request for a restoration proposal containing a modest list of near-term (5-to-10-year) projects backed by existing science and engineering, along with a plan for demonstration projects and ongoing feasibility studies to test and resolve scientific and engineering questions about a range of restoration strategies, both small- and large-scale.

NWF 02 Even operating within those constraints however, we believe the Corps has been unnecessarily restrictive in its thinking. The defined Study Area, for example, excludes a large part of the Atchafalaya Basin, despite the vital role the Atchafalaya River is expected to play in marsh creation (by contributing sediment and fresh water) for large portions of the coastal zone. We strongly encourage the Corps to define the Study Area in a way that enables it take maximum advantage of all appropriate sources of fresh water and sediment needed to nourish and maintain existing marsh and build new marsh.

The draft plan also unnecessarily limits the scope of several of the critical near-term projects. It defines the diversion at Hope Canal and the Bayou Lafourche reintroduction as "small," and the Myrtle Grove diversion as "medium." We are concerned that by so defining these projects, all of them candidates for programmatic authorization and all of poised to demonstrate the effectiveness of important restoration strategies, the Corps is unnecessarily limiting their scope. We urge the Corps to remove the size designations NWF 03

[1] See Guiding Principles. *LCA Study Main Report*. p.78-79.

NWF 01: Comment noted.

NWF 02: Please see General Response #3 regarding the LCA Study Area.

NWF 03: The descriptions and scopes of the LCA Plan components were selected based on their applicability to restoration approaches, ability to be implemented within five to ten years, associated uncertainties, and ability to meet critical needs criteria. These considerations were key in determining the size and scope of those diversions that would provide the most benefit to the ecosystem. In addition, please see General Response #5 regarding the ten-year planning horizon.

Letter 53: Ms. Susan Kaderka, National Wildlife Federation (NWF)

from these projects, along with any limiting preconceptions about what they can accomplish, and commit itself to getting the maximum amount possible from these key restoration strategies. NWF 03 (Continued)

Science Board

NWF 04

On July 15, the National Wildlife Federation joined several of its sister conservation organizations in submitting comments to the Subcommittee on Water Resources and the Environment of the House Committee on Transportation and Infrastructure. In those comments we urged Congress to authorize $100 million for a Science and Technology Program for Louisiana coastal restoration and also to create an independent Science Board to review and comment upon the study, selection, sequence, and operation of authorized restoration programs as well as on the criteria used to select, sequence, and operate those projects. We have since recommended that the Science Board be selected from among nationally recognized experts in the appropriate fields of ecosystem restoration. While we applaud the Corps' inclusion of a $100-million Science and Technology program within the LCA, we find the plan deficient with respect to the Science Board. The description of the Science Board (MR-190-191) is fairly general and is unclear about how independent and public its review function would be. Although we acknowledge that the scientists' role would be advisory, we are anxious that the public have the benefit of their conclusions. It is not clear from the description of the Board's duties and responsibilities whether it would simply be providing advice and recommendations privately to the Corps, advice that could be easily ignored or shelved, or whether it would be part of a more public (and more accountable) process. NWF urges the greatest possible independence for the Science Board and feels strongly that its chair should not be an employee of the Army Corps of Engineers.

Mississippi River Gulf Outlet

NWF 05

The National Wildlife Federation's strongest criticisms of the LCA Ecosystem Restoration Study and Programmatic EIS concern its plans for the Mississippi River Gulf Outlet (MRGO). As the LCA study acknowledges, this channel has by itself caused almost unprecedented destruction of freshwater marshes. There is widespread agreement among a diverse array of stakeholders that the MRGO must be closed. The 1998 *Coast 2050* study made this recommendation; the state legislature recently passed a resolution to that effect, and leaders from the most seriously affected communities within St. Bernard Parish have repeatedly testified to the Governor's Advisory Committee on Coastal Restoration and Conservation about the need to close this channel. Yet the Corps has proposed an $80-million "restoration" project for the MRGO, which involves the construction of rock breakwaters along the entire northern bank and selected portions of the southern bank of the canal. We take strong exception to the inclusion of this project among the "critical near-term" projects slated for programmatic authorization under the LCA. We object to the characterization of rip-rapping as "restoration" and we strongly question the wisdom of spending $80 million to shore up this channel and thereby extend its "useful" life. The Corps should instead propose a plan for the de-authorization of the MRGO and for the physical rehabilitation of the affected area. If temporary measures

NWF 04: Please see General Response #2 regarding the S&T Program.

NWF 05: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 53: Ms. Susan Kaderka, National Wildlife Federation (NWF)

NWF 05 (Continued)

must be taken to prevent further damage in the interim, they should be conducted as pa of the Corps' operation and maintenance activities (and budget). This project has no legitimate place in the restoration plan and its inclusion undermines the credibility of tl entire plan.

Timing

NWF 06

No one familiar with the extent of Louisiana's coastal land loss and its implications fo human safety, for the state's and the nation's economy and security, and for an incomparable coastal wetland ecosystem, can fail to appreciate the urgency of this restoration initiative. Every day, month, and year of delay means additional losses and increased risk to the people of south Louisiana. Yet the process of developing the restoration plan and moving it through channels has been agonizingly slow, in part because of seemingly immovable political and institutional hurdles. Although the proposed "phase one" plan is necessarily restricted to a 10-year window, it should at least reflect the urgency of the longer term, larger scale restoration projects that are essential to its success. NWF and its conservation partners have urged Congress to require the Corps to complete a long-term comprehensive plan by mid-2008. We believe the LCA and PEIS should show that the Corps can and will meet that deadline, regardless of whether or not Congress demands it, because the situation demands it, and because ultimately, the people and the natural resources of Louisiana deserve no less.

Thank you for this opportunity to comment on the draft LCA Ecosystem Restoration Plan and Programmatic Environmental Impact Statement. We look forward to working with you and with the State of Louisiana on this critical restoration effort.

Sincerely,

Susan Kaderka

Susan Kaderka
Director, Gulf States Natural Resource Center
National Wildlife Federation

NWF 06: Please see General Response #8 regarding project implementation protocols and the need for immediate action and General Response #5 regarding the ten-year planning horizon.

Letter 54: Natural Resources Conservation Service (NRCS)

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
3737 Government Street
Alexandria, LA 71302

August 31, 2004

Mr. Tim Axtman
Environmental Planning and Compliance Branch
Planning, Programs, and Management Division
New Orleans District, U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Axtman:

The USDA - Natural Resources Conservation Service (NRCS) has reviewed the Louisiana Coastal Area (LCA) Ecosystem Restoration Study and have attached our comments accordingly.

We appreciate the opportunity to review this document and hope to have a continued, closely coordinated effort by participating in all levels of this endeavor similar to the way that Louisiana's coastal problems are currently being addressed by the agencies involved in the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). We feel that our history of working with landowners and local governments in restoration efforts on Louisiana marshes over the past decades can continue to provide valuable assistance in a cooperative effort in LCA management structure.

Thank you again for the opportunity to comment on these draft documents in this important effort. If you have questions or need further information please contact Britt Paul at (318) 473-7756.

Sincerely,

Donald W. Gohmert

Donald W. Gohmert
State Conservationist

Enclosure

cc: USFWS, Lafayette, Louisiana
NMFS, Baton Rouge, Louisiana
EPA, Dallas, Texas
LDNR, Baton Rouge, Louisiana
LDWF, Baton Rouge, Louisiana
Governor's Office of Coastal Activities, Louisiana
Bill Klein, USACE, New Orleans, Louisiana
Britt Paul, ASTC/WR/RD, NRCS, Alexandria, Louisiana
Cindy Steyer, Soil Conservationist, NRCS, Baton Rouge, Louisiana
Allen Bolotte, District Conservationist, NRCS, Boutte, Louisiana

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Letter 54: Natural Resources Conservation Service (NRCS)

LCA Ecosystem Restoration Study – Draft – July 2004
NRCS Comments

Codes:
~~Red strikethrough~~ – delete
Red bold – insert
Blue italic – comment/clarification only
Green bold – question

Volume 1: LCA Study – Main Report

NRCS 001 Pg.i, Purpose, para.1, sent.1 – "The loss of … since at least the early 1900s …the Nation." *[Geologically this is a natural process with erosional forces outweighing growth when a delta lobe is abandoned. Anthropomorphic forces however often accelerate this process.]*

NRCS 002 Pg.i, Purpose, para.1, sent.3 – "The Coastal Wetlands Planning, Protection and Restoration Act … restore the coastal ecosystem **utilizing the limited funding authorized under that program**."

NRCS 003 Pg.v, Project Delivery Team, para.1, sent.2 – "The team consists of … and ~~U.S. Department of Agriculture~~ **Natural Resources Conservation Service** staff." *[be consistent either list all agencies at department level or all at agency level]*

NRCS 004 Pg.ix, Near-Term Critical …, bullet.4 – "**Small** Bayou Lafourche reintroduction" *[Is this really considered small when White's Ditch on pg.xii is considered medium? If criteria is small at 1-5,000 cfs and medium at 5-15,000 cfs has White's Ditch capable of such input (and landowner contacted)?]*

NRCS 005 Pg.ix, Science and Technology Program, para.1, sent.2 – "The USACE and the non-Federal sponsor have developed …" *[All members of the Project Delivery Team should have greater involvement in the STP process both in development and implementation of the program]*

NRCS 006 Pg.x, Science and Technology Program Demonstration Projects, para.3, bullet.1 – "Marsh restoration and/or creation using ~~saline~~ sediments" *[should not limit use to only saline sediments]*

NRCS 007 Pg.x, Science and Technology Program Demonstration Projects, para.3, bullets – *Apparently hydrologic restoration and outfall management were deemed not to have any uncertainties since they have been omitted*

NRCS 008 Pg.xii, Near-Term …, para.2, bullet.6 – "**Medium** diversion at White's Ditch" *[refer to earlier comparison to Bayou Lafourche]*

NRCS 001: Concur. We have added the term "accelerated" at the beginning of the sentence.

NRCS 002: Concur. Changes made to the final report.

NRCS 003: Concur. Changes made in the final report to ensure consistency.

NRCS 004: The Bayou Lafourche reintroduction is considered small because it would involve a discharge of less than 5,000 cfs. The PDT believes that a medium diversion is possible at White's Ditch, however, follow-up feasibility level analyses will determine the ultimate size of the diversion. Landowners in the vicinity of the proposed diversion at White's Ditch will be given another opportunity to comment on the proposed project and its various alternatives in the NEPA process during the feasibility-level analysis.

NRCS 005: With the exception of the Science Director, the S&T Office will not be permanently staffed, but it will be staffed in accordance with the level of effort and required tasks. It is highly probable that Federal and state agency scientists will be members of these teams from time to time, on a case-by-case basis. The expertise that each of the agencies brings to the restoration effort, and their unique perspectives on the uncertainties associated with coastal restoration will help guide the S&T Program.

NRCS 006: The uncertainty identified for resolution via a demonstration project has been the viability of using saline sediments for marsh restoration, and the ecosystem response as a result of this practice.

NRCS 007: There are/will be relevant uncertainties regarding hydrologic restoration and outfall management whose resolution would enhance LCA Plan restoration efforts; however, the list of uncertainties and associated demonstration projects presented in the Main Report represents the initial effort in resolving scientific and engineering uncertainties.

Letter 54: Natural Resources Conservation Service (NRCS)

NRCS 007 (Continued): The S&T Program includes additional funding for demonstration projects above and beyond those identified in the Main Report. Agencies within the PDT, academia, the local sponsor, and the USACE will assist in the identification of relevant uncertainties that need to be resolved, from which demonstration projects will be developed.

NRCS 008: See response to earlier comparison to Bayou Lafourche.

Letter 54: Natural Resources Conservation Service (NRCS)

LCA Ecosystem Restoration Study – Draft – July 2004
NRCS Comments pg2

NRCS 009 Pg.xiv, Table ES-2, line.4 – "**Small** Bayou Lafourche reintroduction" *[this is labeled as small with a cost of $90,000,000 while farther down White's Ditch diversion is labeled as medium with a cost $35,200,000 – less than half of Bayou Lafourche cost]*

NRCS 010 Pg.xv, Areas of Controversy, 2. Wide-spread public demand for the immediate construction …, sent.1 – "Elements of the public expressed concern than the LCA restoration effort will focus on the need for more studies …" *[CWPPRA also had this early concern and it was countered with 20-year monitoring to enable projects to be tweaked (adapted) as information is learned, both LCA and continuation of CWPPRA can help answer this with monitoring ~ this needs to be addressed somewhere in the document, both historically and planned]*

NRCS 011 Pg.MR-15, 1.6.1 History of Coastal Restoration Efforts, para.3, sent.2 – "The initial priority of the CWPPRA Task Force, comprised …. USFWS, …. NOAA and USDA …" *[for consistency need to either change USFWS to Department of Interior (DOI) and NOAA to Department of Commerce (DOC), or change NOAA to NMFS and USDA to NRCS – this is a mixture of department levels to agency level]*

NRCS 012 Pg.MR-16, 1.6.2 Prior Studies, Reports, and Existing Water Projects, sent.4 – "A more through listing … can be found in attachment 2 to this report." *VERIFY ~ that CRBS etc. are included*

NRCS 013 Pg.MR-20, 1.6.2.5 Third Delta

NRCS 014 Pg.MR-26, 2.1.2.3 Oil and gas infrastructure, para.2, sent.1 – "Dredged material banks, which …water across wetlands." *[There is a positive side to wooded spoil banks especially where natural banks have subsided and woody species drowned, as both refugia during high water events and necessary habitat for migrating neotropical avian species ~ these needs to be explained at some point(s) in this report]*

NRCS 015 Pg.MR-26, 2.1.2.3 Oil and gas infrastructure, para.2, sent.5 - "Importantly, dredged material banks … elevations (~~Reed, 1997~~ **Reed et al. 1997**)." *[Is this the correct publication for this citation?]*

NRCS 016 Pg. MR-33, para.3 ~ *The two sentences are incorrect. The western Terrebonne Parish marshes are not completely isolated from riverine influence. The Avoca Island Cutoff, Bayous Boeuf & Chene, and bayous connecting the westernmost marshes with Atchafalaya Bay do provide linkages with the Atchafalaya River system. System dominance of the western Terrebonne marshes occurs, in fact, in a gradient that trends from riverine (influence) to marine moving generally NW to SE in the landscape. However, zonal fluctuation occurs frequently in the central portion of the western marshes as they are exposed to varying combinations of the Atchafalaya R seasonally-fluctuating discharge, precipitation events, &*

NRCS 009: The size of a proposed diversion is just one factor that is considered in the development of a cost estimate for construction of a project. On-site conditions, the length of conveyance channels, and a host of other engineering and design issues can impact a construction cost estimate. In some cases such as the one identified by the comment, a "small" diversion project can have a construction cost estimate much higher than a "medium" diversion project in a different area with differing site-specific issues and unique engineering and design considerations.

NRCS 010: Comment noted. The LCA Main Report does discuss the need for continued assessment and monitoring as part of the S&T Program to fuel the Adaptive Management process and refine restoration features and enhance performance of the LCA program to meet its objectives. The S&T appendix specifically discusses the intention to expand upon the monitoring program developed by CWPPRA for use with implementation of the LCA Program.

NRCS 011: Concur. Changes made to the final report to ensure consistency.

NRCS 012: Concur. CRBS etc. are included.

NRCS 013: No comment offered for a response.

NRCS 014: Concur. Language has been included in the LCA Plan.

NRCS 015: Citation has been corrected in the LCA Plan.

Letter 54: Natural Resources Conservation Service (NRCS)

NRCS 016: The text has been revised to state that the eastern portions of the Terrebonne Basin are hydrologically isolated. The wetland communities within the western portion of the Terrebonne Basin (which include those located both north and south of the GIWW) have been, in part, hydrologically separated from the influence of the Atchafalaya River. Instead the hydrology of the area is influenced by a widely variable pattern of Atchafalaya River backwater effect, rainfall runoff events, and marine processes.

Letter 54: Natural Resources Conservation Service (NRCS)

NRCS 016 (Continued)

LCA Ecosystem Restoration Study – Draft – July 2004
NRCS Comments pg3

progressive encroachment of marine influence as wetlands in the southern areas deteriorate.

NRCS 017

Pg.MR-42, 2.2.2.2.1 *Deltaic & Chenier Plains*, para.2, sent.3 - "In Louisiana it is well documented … Cahoon et al., 1995), **while some freshwater areas will still be able to maintain elevation through underground vegetative growth (Nyman and DeLaune, 1991**)."

Pg.MR-53, 2.2.3.2.1 *Existing conditions*, para.1, sent.3 - "On a ton-mile transported basis, … the United States, **2003**)." *[Listed as 2002 in References-6]*

Pg.MR-56, 2.2.3.4.1 *Existing conditions*, para.1, after sent.3 – *Add:* **Much of this agricultural land is considered prime farmland and protected under the Farmland Protection Policy Act of 1981.**

Pg.MR-57, 2.2.3.5.1 *Existing conditions*, para.1, sent.5 - *Add:* **Other festivals celebrate the birds that pass through the state … see list of La. Bird Festivals**

Pg.MR-60, re bulleted list of wetland ecosystem functions:
1st bullet – change to "Vegetative habitat stability and community diversity"
2nd bullet – change to "Elevational maintentance and soil contribution from decomposing organic material:
Add another bulleted function – "Nutrient uptake and carbon sequestration

Pg.MR-61 2.3.1 Problems – *Add bullet:* **Agriculture**

Pg.MR-62 2.3.3 Opportunities, para.2, bullet.1 – "Freshwater Re-introductions **and outfall management** – Diverting water …"

Pg.MR-64 2.3.3.3 Nearshore and offshore sand resources, Terrebonne/Timbalier offshore sand resources (Ship Shoal), para.1, sent.4 – "It is composed primarily … (Stone, 2000) **and as the name implies, may have significant historical sites associated both within and on its surface**."

Pg.MR-67 3.1.1 Scientific and Technological Uncertainties, para.1, sent. 1 – "Scientists have documented … Herke, 1993; Michot, 1993; **Olsen and Noble, 1976**), …"

Pg.MR-68 3.1.1 Scientific and Technological Uncertainties, para.2, sent. 5 – "These efforts **are an extension of the existing monitoring program used** to identify "lessons learned" … worked" **on projects that have been built long enough to provide any useful data**." *[major conclusions on "Adaptive Management" have been that WVA process, etc. is already being adaptively managed and only early projects have data, albeit limited, that could even be examined]*

NRCS 017: Concur. Changes made to the LCA Plan.

Letter 54: Natural Resources Conservation Service (NRCS)

LCA Ecosystem Restoration Study – Draft – July 2004
NRCS Comments pg4

NRCS 017 (Continued)

Pg.MR-73 3.1.2.2 Type 2 – Uncertainties about engineering …, bullet.1 *Remediation of canals for marsh restoration*, sent.5 – "If backfill is used, impacts … on the local ecosystem **(e.g., neotropical migrants)** may need to be addressed."

Pg.MR-87 bulleted list for Subprovince 3 & MR-91 at bottom of Table MR-9
Approaches:
1st bullet :& approach 1 – change to Rehabilitation/maintenance of geomorphic features
3rd bullet & approach 3 – change to Maximize Mississippi and Atchafalaya Flows

NRCS 018

Pg.MR-103 3.3.6.1.1 *Subprovince 1 feature descriptions*, Medium diversion at White's Ditch ~ *{Seems like a lot of water to be placed in a narrow confine, the siphon previously running at 250 cfs carried a fairly extensive sediment load that required dredging to keep the channel open; with landowner concerns regarding the undercutting of live oaks along the existing banks (and historic site) is a opening of this magnitude feasible?}*

NRCS 019

Pg.MR-112 3.3.6.1.2 *Subprovince 2 feature descriptions*, Third Delta, para.1, sent.7 – "The study … efforts **since it would require construction either through wetlands or prime farmland**."

NRCS 020

Pg.MR-116 – re Maintain Timbalier Land Bridge, 2nd sentence: *Caillou Lake is not between Bayou Terrebonne & Bayou Lafourche. Correct name(s) of referenced geographic feature.*

NRCS 021

Pg.MR-117 – *Why is Timbalier Island omitted from the Terrebonne Basin Barrier Shoreline Restoration feature?*

NRCS 022

Pg.MR-117 – *this feature does not refer to the "Southwest Pass of the Atchafalaya River". This is the water body that connects the southwest Vermilion Bay with the Gulf of Mexico.*

NRCS 023

Pg.MR-122 3.3.6.1.4 *Subprovince 4 feature descriptions*, Modify existing Cameron-Creole watershed structures, para.1, sent.5 – "If the weir sills … increased fisheries access **(above that afforded by the vertical fish slots already in the structures)** would occur …" *[Note: the final monitoring report on the Cameron-Creole Watershed project is expected out within the year and this should answer a lot of the questions regarding the effectiveness of this project ~ last report was done during a high water event and may have given false impression of excess water conditions]{A push for study of effectiveness of slots would be of greater importance since no definitive answer exists as to size, number, etc. needed}*

NRCS 024

Pg.MR-123 3.3.6.1.4 *Subprovince 4 feature descriptions*, Salinity control at Oyster Bayou ~ *{the open end of the N-S canal off Oyster Bayou is probably the largest cause of increased salinity in the area and would be the easiest/cheapest to fix}*

NRCS 018: The PDT believes that a medium diversion is possible at White's Ditch. However, follow-up feasibility level analyses will determine the ultimate size of the diversion.

NRCS 019: Concur. Changes made to the final report.

NRCS 020: Will insert new sentence reading "A grid of numerous channels and deteriorating lake shorelines has increased the hydrologic connection between Lakes Barre, Felicity, and Raccourci and adjoining water bodies."

NRCS 021: The status of Timbalier Island has been included in the discussion of the Terrebonne Basin Barrier Island Shoreline restoration. While Timbalier Island and other portions of the shoreline are integral components for comprehensive restoration, the proposed restoration features focused on those parts of the barrier shoreline that are most threatened with loss (i.e., the most critical), and those reaches that do not already have some type of on-going restoration effort under other programs.

NRCS 022: Sentence should read "…maintain the integrity of the Southwest Pass channel connecting southwestern Vermilion Bay with the Gulf of Mexico by…"

NRCS 023: Concur. Changes made to the final report.

NRCS 024: While this feature is not currently a component of the LCA Plan, any future feasibility studies on this restoration feature would evaluate a range of potential alternatives to determine the best means of addressing the identified salinity problem.

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NRCS 025 Pg.MR-136 – *The Upper Breton Sound Reintroductions Opportunity is only listed as meeting Criteria 2 & 4, but it should be noted that it addresses Criteria 1 or 3, prevents future loss or restores or preserves critical geomorphological features. Otherwise, how could it be claimed that "it protects vital economic resources located along the east bank of the Mississippi River…?"*

NRCS 026 Pg.MR-137 – regarding the Lac des Allemands Area Reintroductions Opportunity: *In 1st paragraph following bulleted list, last sentence include that this opportunity has the potential to prevent swamp degradation and stagnation.*

Pg.MR-141 – *Reword last sentence preceding Table MR-16. Suggest:* **A summary of the restoration features and restoration opportunities included in each of the 15 alternative plans is detailed in table MR-16.**

NRCS 027 Pg.MR-144 – the 2nd to last sentence doesn't make sense. *Suggest change to:* **Additionally, geomorphic structural features are more sustainable because they are continuously connected to the river resource and nourished by its sediment and nutrients.**

NRCS 028 Pg MR-148 – *says "PBMO is intended to provide a mechanism to continue to assess and address cumulative impacts to the environment & to achieve consistency by applying a systems approach to the full life cycle of all related water resources activities in the LA coastal area."*

NRCS 029 Pg.MR-151 - *reference is made to the "PDT" in discussions in sections 4.1 Evaluation of Plan Implementation & 4.2 Summary of TSP Components & Implementation Schedule. The entire PDT did not participate in this portion of plan development. Consequently all references to the PDT in these sections should be corrected to reflect that only COE & state of Louisiana members of the PDT were responsible for determining the prioritization, applying assumptions, and making other selection decisions as described for implementation sequencing.*

NRCS 030 Sections 4.1 Evaluation of PBMO Implementation & 4.2 Summary of Tentatively Selected Plan (TSP) Components & Implementation Schedule (MR-151 through MR-155): These sections state that assumptions and sequencing rules were established to evaluate implementation and resulted in prioritized component features recommended for authorization. However, the discussion does not provide a clear description of how the final group of PBMO component features was selected to compose the resulting TSP components & implementation schedule. Assumptions & sequencing rules are provided in bulleted lists, but no discussion is included on the actual application of the assumptions and rules to each component that led to the resulting prioritization (table MR-18). A description of how sequencing rules were individually applied to prioritize feature implementation is necessary, similar to the discussion of the Sorting & Critical Needs Criteria and their application in assessing each feature was provided in

NRCS 025: Projected future losses in this area are extremely small. The proposed features would increase the area of vegetated wetlands in the area. In this manner they are adding additional protection for existing socioeconomic activities but do not address either criteria #1 or #3.

NRCS 026: Concur. Changes made to the final report.

NRCS 027: The sentence has been rewritten to clarify why river diversion projects are more sustainable.

NRCS 028: Comment noted. No issue has been raised in the comment.

NRCS 029: Concur. Changes made to the final report.

NRCS 030: Concur. Additional language has been included in the final report to better describe the methodology that led to the development of the LCA Plan.

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NRCS 030 (Continued)

prior Sections 3.4 and 3.5. This information is especially important as this section should clearly capture the final methodology used to arrive at, and support, the TSP components and implementation schedule that is ultimately recommended. As presented, there are some inconsistencies and lack of information in the Plan Implementation section. These are:

NRCS 031

1) Some portions of the TSP features or opportunities were revised since discussed in previous sections, but no explanation is provided on the purpose or process that led to the revision. For example, the MRGO feature is initially described on page MR-105 as involving "implementation of the environmental restoration features under consideration by the MRGO Environmental Restoration Study" which would "evaluate stabilization of MRGO banks, various environmental restoration projects including evaluation of freshwater reintroduction into the Central Wetlands and possible channel depth modifications." On pg MR135, in the discussion regarding the ability of this feature to address critical needs Criteria 1,3,& 4, this feature was determined to "have the potential to restore previously degraded wetlands," in addition to other benefits. On later pgs MR-162 and163, this feature is described as consisting solely of rock breakwater along the entire north bank of the MRGO and selected sections of the Lake Borgne shoreline. It is then stated on MR-162 that "this feature has been identified as a near-term critical effort based first on its inclusion in seven of the seven cost-effective, coast wide restoration frameworks, and on its ability to meet specified critical need criteria." The feature that was included in the 7 of 7 frameworks however, consisted of the elements first described on pg 105 – not a rock breakwater element alone. It is stated on MR-163 that this single-element feature addresses identified, imminent, and critical needs by preventing wetland loss where it is predicted to occur, preserving critical, endangered geomorphic structure…and avoiding significantly higher long-term restoration costs, protecting critical infrastructure", etc. To address this inconsistency, section 4.2.3.1.1 should explain the process and/or analysis that led to the determination that the bankline stabilization element alone (and above the other elements being considered such as installing a structure at the La Loutre ridge, closure or reduction of MRGO channel cross-section, or establishing rock breakwater only along the section adjacent to the Lake Borgne shoreline) best addresses the critical near-term ecologic need to the extent that was originally anticipated and that supports its resulting ranking in the implementation schedule.

NRCS 032

2) Another example of revisions made without explanation: The 1st principal component of the PBMO contained three "restoration opportunities," each comprising a group of features: the Maurepas Swamp Reintroductions, Terrebonne marsh restoration opportunities, and the Lac des Allemands area Reintroductions. In discussion on pg MR-132 section 3.4.3, it explains that, where application of the 3rd Sorting Criteria determined that implementation of an individual feature was deemed to be interdependent, it necessitated combination with other dependent features, as appropriate, to create "restoration opportunities", which must then be reassessed as a composite, or the feature did

NRCS 031: Concur. Inconsistencies with the MRGO restoration feature have been corrected in the LCA Plan. The relationship of the MRGO restoration feature to related studies is explained below. In addition, the Main Report has also been revised to explain changes that were made in some restoration features during the implementation sequencing effort, based on schedule, resource and other implementation constraints.

The proposed near term restoration feature for MRGO included in the LCA Plan is a multiphased process for addressing environmental restoration on MRGO. The near-term restoration feature (first phase) proposed in the LCA Study Report and FPEIS involves the construction of protective breakwaters along the strategic segments of the north bank of the MRGO and the southern shoreline of Lake Borgne. These segments are in danger of breaching, and if not quickly addressed, threaten the integrity of the Lake Borgne ecosystem and future efforts to restore other features in the area. The proposed restoration feature is required to address the most critical needs for the MRGO restoration. Stabilization of MRGO is a critical requirement, because allowing the canal to breach the southern shoreline of Lake Borgne would have significant impacts on the hydrology and ecology of the area, and could have a large impact on the salinity gradient in the area. The resulting increase in salt water intrusion into intermediate, brackish and freshwater areas would cause changes in hydrologic conditions, habitat loss, and increased erosion rates, some of which may be irreversible by future restoration actions. In addition, these changes would have negative impacts on property and human activities in the area, including increased vulnerability to flooding in occupied areas, loss of economic opportunities related to shellfish and finfish harvests, and impacts on navigation and related commercial activity in the area.

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NRCS 031 (Continued): The proposed installation of rocks to constrict the breaches between MRGO and Lake Borgne, maintain the shoreline of Lake Borgne, and stabilize the north bank of the MRGO is fully consistent with the near-term strategies of the Coast 2050 Plan, a plan developed on a consensus basis involving a large body of the public, stakeholders, and parish and municipal representatives. Rock was chosen for the LCA report based on the considerable working knowledge available on the design, placement and maintenance of breakwaters. While other materials or methods may potentially be used to augment and stabilize the canal banks, considerable effort would be required to evaluate the technical feasibility and implementation methods for alternatives to rock breakwaters. Because of the reliability of these construction methods and materials, the proposed feature is considered the best available option that can be implemented on a schedule that would avoid the potentially irreversible impacts related to breaching of the canal – Lake Borgne shorelines. Riprap bank stabilization structures have a design life of 50 years, but may be useful for longer periods.

While there are considerable capital costs associated with implementation of this feature, its implementation does not preclude later actions that may include modification or closure and reclamation of the canal. Other restoration features of the multiphased MRGO restoration will be accomplished under the "modifications to existing structures" (a navigation channel is considered a structure under civil works) programmatic component of the LCA Plan.

The resolution of the future use of the MRGO is critical in determining the ecosystem restoration measures that can be developed for this part of the coast. Currently, a separate evaluation of the economic and ecological aspects of the MRGO project is being completed. The primary goal of this separate study is to determine the viability of the continued use of MRGO for deep draft navigation.

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NRCS 031 (Continued): The results of this study will provide insight into restoration options for MRGO to be developed under the LCA Program. Additional restoration features beyond this first phase critical-needs action will be determined using the "modifications to existing structures" element of the LCA Plan for restoration of the hydrologic and ecologic functioning of the area. Future action resulting in closure of the MRGO to navigation would also require alternative navigation routes and port facility configurations in order to meet the transportation needs that are currently served by MRGO. The second phase of the MRGO (conducted under the "modifications to existing structures" element of the LCA Plan) would take into consideration the navigation authority, but could recommend future ecosystem restoration activities that include closure or modification of the MRGO channel or channel relocations necessary to meet restoration goals.

NRCS 032: Concur. Language has been included in the final report to clarify why certain restoration opportunities were ungrouped.

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not continue through the process to determine the near-term critical features. "The sorting criteria application that determined what were the possible near-term critical features…was considered fixed." – pg MR-127. Yet, section 4.0 Plan Implementation shows the features of the Terrebonne and Maurepas opportunities were ungrouped and prioritized individually in determining the TSP component features, while the Lac des Allemands features were apparently ranked as an intact group. Further discussion relates that the Lac des Allemands opportunity was "found to be beyond the 10-year implementation window." An explanation should be provided regarding the reasoning to "unfix" application of Sorting Criteria #3 to all opportunities except the Lac des Allemands opportunity. As presented, it is not shown whether the potential for construction of the individual Lac des Allemands features within 10 years was considered. NRCS 032 (Continued)

3) As currently planned, the Bayou Lafourche feature is to divert 1000 cfs of freshwater from the Mississippi River of which portions are to be split and conveyed into remote wetlands in Terrebonne and Barataria basins. The Davis Pond diversion is now discharging into Barataria Basin with a current operation plan that is expected to benefit large areas of the basin including those predicted to be benefited by Bayou Lafourche. Davis pond discharge capacity could be increased to greater than 10,000cfs, though it's not in current operation plan. Davis Pond construction cost has already been incurred & the project is already built – o info is provided to justify an additional $90 mil construction cost to add less than 1000 cfs to benefit the same areas in Barataria basin that have been identified as part of area that Davis pond operation currently benefits; and, Davis pond structure discharge could be further increased. Yet, Davis Pond reauthorization is #15 near-term feature of the TSP. In addition, no information is provided to justify this cost to provide less than 1000 cfs to the same Terrebonne marshes that 1) the HNC project, an authorized project & #6 near-term feature of the TSP, should provide benefits for, and that 2) the feature "Convey water to eastern/northern Terrebonne marshes project", #13 near-term feature of the TSP, is also projected to benefit by providing 4000-5000cfs to a larger area of benefit for the same cost. NRCS 033

This contradicts the assertion that the Bayou Lafourche feature has been recommended for programmatic implementation based primarily on its capability to address critical ecological needs. Due to the uncertainty of benefits, NRCS recommends excluding the Bayou Lafourche project as a TSP feature, particularly as a feature in the programmatic authorization component, and substitute with features able that provide salient benefits to best address the critical ecosystem needs in eastern Terrebonne and western Barataria.

4) The Main Report indicates that, because the Penchant Basin feature was ranked nearly last in the prioritization process, it was determined that implementation could not be initiated within 10 years. But, that restoration project, under the auspices of CWPPRA, has undergone extensive hydrologic modeling, the plan has undergone revision, and it is nearing completion of the E&D phase. It is NRCS 034

NRCS 033: None of the 15 critical restoration features have been "ranked" in importance, and the number designations in the final report have been removed. Currently the Bayou Lafourche Fresh water Reintroduction feature has a significant level of design development, including hydraulic modeling of flow in the existing channel. In addition the NEPA (EIS) documentation development has already been initiated. Hydrologically the key to addressing loss problems in the eastern Terrebonne Basin centers on the delivery of freshwater, sediments, and nutrients. The need to employ multiple features to provide these resources to achieve the necessary level of beneficial output is highly probable and the LCA Plan reflects this in the composition of its critical features. In order to distribute water flow throughout Terrebonne, fresh water must be introduced to raise the head in the northern portion of the basin. The HNC will capture most flow even if the head is raised by the Atchafalaya River. Bayou Lafourche will help raise head across the entire northern Terrebonne basin. However, there are currently no hydraulic or model analyses to verify that the expected hydrologic conditions associated with operation of the HNC lock, Delivery of Atchafalaya River water to the Northern Terrebonne Marshes will occur. The most certain projection of future hydrologic conditions at this time is that Davis Pond flows will be delivered north to south through the Barataria Basin and that some of this flow will likely travel westward in the GIWW. This trend will have some effect on the Atchafalaya River flows traveling eastward in the GIWW. What this effect is as yet undetermined, however the possibility that it may result in the reduction of Atchafalaya River flows, or the extent that they travel to the east, cannot be discounted. The historic hydrology of the deltaic plain has been predominantly north to south. As a result, while there may be some uncertainty in the quantity of beneficial output, the delivery of freshwater through Bayou Lafourche could be expected, with reasonable certainty, to be successful regardless of the other future actions being proposed in the LCA Plan.

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NRCS 033 (Continued): The delivery of Mississippi River water through the Bayou Lafourche channel would be consistent with historic system hydrology and a logical initial step in implementing restoration plans in this area.

NRCS 034: Currently the features identified for a programmatic or contingent authorization have a significant level of design development. In addition NEPA (EIS) documentation development has already been initiated for these features. The initiation of NEPA compliance is an indication that a critical assessment of alternative actions, which would be a required product for completion of a feasibility level decision document under the LCA Program, is in progress and being documented. While the Penchant Basin Plan also has a high level of design information no NEPA compliance effort has been initiated. As a result there is a lesser confidence that the Penchant feature could be advanced to the point of construction approval prior to there being another WRDA Act considered by Congress and therefore no need for programmatic or contingent authorization. It appears that the continued consideration and approval of this feature under the CWPPRA program would result in its most rapid implementation. The availability of WVA information for the Penchant Basin plan is not a factor in the treatment of the feature within the LCA Plan. The inclusion of benefit information for the features requesting programmatic or contingent authorization, much of which was based on WVA assessments, was a necessary action for the justification of that request.

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possible that construction authorization will be requested within a year. This raises additional question about application of the prioritization process when it is asserted that the Bayou Lafourche feature has been recommended for programmatic implementation also based on "the fact that significant design efforts are already underway." It is likely that, due to plan revisions, the benefits of the Penchant Basin project will have to be recalculated, but the revised average annual cost per AAHU is expected to show cost-efficiency is maintained (if the initially predicted AAHU's (1,204) are halved, and the average annual cost per AAHU ($1,034) are doubled, the cost of the Penchant feature and the average annual cost per AAHU would still be one-fourth that of the proposed Bayou Lafourche feature). Additionally, this feature was also included in all seven of the seven coastwide restoration frameworks. The Penchant feature would address an identified critical ecological need and moreover, provide benefits to an area not addressed by any other TSP feature. NRCS recommends that the prioritization be reconsidered, and discussion be revised to clearly address these inconsistencies. NRCS 034 (Continued)

5) The Myrtle Grove feature is potentially a large diversion – 2,500 to 15,000cfs is the potential discharge range being considered. In the discussion of this project as a feature for programmatic authorization, the benefits claimed are for the maximum discharge of 15,000cfs, but the map in figure MR42 on pg MR176 shows a boundary of northern edge of expected oyster production which is the same as the Davis Pond oyster boundary unchanged. With the addition of the Myrtle Grove feature, which is potentially larger and further south in the basin than Davis Pond and overlaps in benefited area, it would be likely that any discharge much greater than 2,500cfs would influence a significant shift of that boundary line southward. In contrast, the unchanged boundary shown on this map implies that the Myrtle Grove discharge will likely be closer to the minimum 2,500 cfs. A project discharge near the upper limit has obvious potential to impact fisheries within the entire Barataria Basin area. BTNEP and others have gone on record as advocating freshwater diversions in combination with other restoration techniques, but have stated their opposition to drastically changing the salinity gradient and compromising the biologic diversity in Barataria Basin. NRCS recommends that discussion about predicted project impacts and benefits should be specifically linked to a particular level of operation so the intent of the feature, and its capability in influencing critical ecosystems, is as clear as possible. NRCS 035

Lastly regarding the Myrtle Grove feature, in light of the actual experiences with the extended implementation of the Caernarvon & Davis Pond structures, uncertainties associated with initiating construction of the Myrtle Grove feature in the 5 to 10-year near term must be seriously taken into account. Inappropriately sizing this diversion feature could cause long-term delay while simultaneously precluding other beneficial features that could be accomplished in the near term.

6) NRCS is concerned that sufficient narrative is not provided to support some elements of the TSP plan components, or their prioritization is not appropriate as NRCS 036

NRCS 035: The influence areas for this Myrtle Grove restoration feature are based on approximately a 5,000 cfs freshwater diversion. The verbiage in the Main Report has been changed to reflect that benefits are based on a 5,000 cfs diversion. One of the primary reasons for the long delays in construction the Davis Pond and Caernarvon fresh water diversion projects was the fact that there was not a willing local sponsor for them. The recommended Myrtle Grove freshwater diversion restoration feature does enjoy the support of the local sponsor, and the engineering, design, and implementation efforts from the Davis Pond and Caernarvon projects will aid in the development of the preliminary engineering and design for a Myrtle Grove fresh water diversion project following completion and approval of feasibility-level analyses.

NRCS 036: The sequencing of the features identified in the LCA Plan is based on determining the most effective possible manner to bring those features to approval and construction. All of the features identified in the LCA Plan are by definition critical in nature. However, levels of fiscal appropriation, feature readiness, and the potential for conflict with future restoration actions under consideration do not support the immediate initiation of every feature. The expected annual cost-shared appropriation limit of approximately $200 million provides a basic guide for the amount of work that can be underway in any year. The level of development and status of NEPA documentation provides insight into which features could be brought to construction approval and implementation most rapidly. These most ready features could benefit from a programmatic or contingent authorization. Not based on critical need but on the potential to achieve rapid implementation. Some features identified in the PBMO presented potential redundancy in relation to long-range concepts proposed for consideration and therefore were sequenced until after consideration of these concepts is complete. This resulted in the inability to execute these features in the ten-year near-term. Other features appeared to be near readiness through other programs and funding authorities and so the best avenue to implementation appeared to be allowing that ongoing process to continue.

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currently presented in meeting the near-term critical ecosystem needs in a cost-effective manner. In particular, the component of features put forth for programmatic authorization should emphasize establishment of a resilient, sustainable underpinning upon which to construct subsequent features. To that end, it is imperative that the recommended plan reflect rigorous adherence to addressing the most critical, near-term ecological needs. Every effort must be made to efficiently utilize existing opportunities and pursue efforts which collectively provide beneficial effect on the widest area possible, particularly in light of the near-term budget. Initial implementation efforts must support and enhance subsequent features so that synergistic effects are continually increased as implementation progresses. Adopting a logical order of implementation, such as a "top to bottom" approach within a basin/subprovince, or "chaining" of major landforms and projects, would facilitate continued increase of synergistic effects and enhance leveraging of limited funds.

NRCS 036 (Continued)

7) Consistency and coordination between coastal restoration efforts is very generally referred to in the Main Report. While acknowledging that technical input from the formal Cooperating Agencies for the LCA Study has contributed to the completeness and correctness of the study, and that "continued cooperation and collaboration will greatly assist in effective plan implementation…," no details are provided as to just how that would be carried out. The support and interaction with the CWPPRA Task Force agencies as described is essentially a one-way process where the CWPPRA Task Force agencies would be briefed through a respective agency's chain of command, and invited to attend the LCA Task Force meetings and Governors' Advisory Committee meetings "as necessary." Functions and responsibilities of the (LCA) Cooperating Agencies and the CWPPRA Task Force should be clearly described.

NRCS recommends providing representatives of the formal Cooperating Agencies for the LCA Study (MR-193), at least, with decision making authority to facilitate local LCA TSP implementation and the adaptive management process, similar to that of the CWPPRA Task Force.

NRCS 037

8) The Main Report says "the recognition that uncertainty is unavoidable…in large scale ecosystems is used to support importance of integration/use of adaptive management (AM) as a component of LCA plan implementation. An important part of the AM component is utilizing a comprehensive, integrated modeling effort that provides consistent predictions & multi-level assessments of LCA actions' effects – particularly as integrated in landscape. Although it is implied in the S & T appendix, this Main Report doesn't specify whether modeling work already done for plan development will be continued. Future LCA implementation should capitalize on the multi-tiered modeling framework developed to date because it is oriented to the "systems" aspect of the LCA approach, and can be continually refined with placement in the AM feedback loop. This would provide an important means of diminish the uncertainty of large-scale ecosystem application.

NRCS 038

NRCS 036 (Continued): Those features for which a Congressional Authorization was being requested, programmatic or contingent or otherwise, required a greater level of detail and justification. The emphasis was placed on these feature to secure justification to improve implementation capability rather than to indicate more critical need or higher priority.

NRCS 037: The agencies, through collaboration, will continue to work towards implementation and future efforts. With the exception of the Science Director, the S&T will not be permanently staffed, but will be staffed in accordance with the level of effort and required tasks. It is highly probable that Federal and state agency scientists will be members of these teams from time to time, on a case-by-case basis. But they will serve as technical experts and would represent agency positions on regulations or policy. Dialogue and shared responsibility would take place at the regional and task force level though there will not be joint decisions.

NRCS 038: Concur. Language has been added to the final report that states that ongoing modeling efforts will continue to be an integral component of the S&T Program to assist the implementation of the LCA Plan.

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NRCS 039 Pg.MR-168 4.2.3.1.3 Restoration of Shell Islands Reach, para.1, sent.1 – "The Shell Islands Reach stretches ~~2.5~~ **over 5** miles to …"

NRCS 040 Pg.MR-168 4.2.3.1.3 Restoration of Shell Islands Reach, para.1, sent.3 – "The Shell Islands Reach ~~is~~ currently ~~highly fragmented in small shoals and islands,~~ **consists of open water with no land remaining except for isolated marsh clumps back in the interior area** …"

NRCS 041 Pg.MR-168 4.2.3.1.3 Restoration of Shell Islands Reach, para.3, sent.1 – "The long-term erosion rate … to ~~101.5~~ **115.4** ft.yr."

NRCS 042 Pg.MR-171 4.2.3.1.4 Small Bayou Lafourche reintroduction ~ *Bayou Lafourche was included but Penchant Basin was not, yet each had extensive studies completed (Penchant actually closer to construction in CWPPRA) ~ need consistency in determination for Near-Term inclusion*

NRCS 043 Pg.MR-188 4.2.4 Coastal Louisiana … Task Force, para.2 ~ *This Task Force level located in Washington DC is the only place where all the agencies that have so worked in cooperation to get coastal Louisiana projects planned and constructed under CWPPRA exists; this cooperation in planning, design and construction needs to extend down to local working level*

NRCS 044 Pg.MR-190 4.2.7.1 Science Board, para.2, bullet.4 – "A representative of appropriate additional Federal agencies" *[This should include at least one scientist from each of the CWPPRA federal agencies in order to utilize their 14+ years of experience in the coastal work of Louisiana]*

NRCS 045 Pg.MR-193 4.3.1 CWPPRA Task Force, para.1 ~ *This again needs working level support from CWPPRA agencies, not just CWPPRA Task Force*

NRCS 046 Pg.Reference-2 – *Verify:* "Holling, C.S. and Gunderson, L.H. 2002. …" *[Did not notice this reference in text]*

NRCS 047 Pg.Reference-4 – *Add:* **Olsen, Robert B. and Robert E. Noble. 1976. Spoil Bank Avifauna in the Intermediate Marshes of Southwestern Louisiana, Proc. Southeast. Assoc. Game & Fish Comm., 30:575-580.**

NRCS 048 Pg.Reference-5 – *Verify:* "Steyer, G.D. … 2003. …" *[Did not notice this reference in text]*

NRCS 049 Pg.Reference-6 – *Verify:* "Waldemar Nelson and Company. 2003. …" *[Did not notice this reference in text]*

NRCS 050 Pg.Reference-6 – "Waterborne Commerce … 2002. …" *[In text is listed as 2003]*

NRCS 039: Five miles is the correct length.

NRCS 040: Text has been revised to read "The Shell Island Reach is currently highly fragmented in small shoals, open water, and very small islands, …"

NRCS 041: Text has been revised.

NRCS 042: See previous response regarding Penchant Basin and its absence from the LCA Plan.

NRCS 043: The agencies, through collaboration, will continue to work towards implementation and future efforts. With the exception of the Science Director, the S&T Office will not be permanently staffed, but it will be staffed in accordance with the level of effort and required tasks. It is highly probable that Federal and state agency scientists will be members of these teams from time to time, on a case-by-case basis. Dialogue and shared responsibility would take place at the regional and task force level though there will not be joint decisions.

NRCS 044: Composition of the S&T Program is dependent on level of effort at any particular time. However, it is envisioned that each agency would bring to bear experts in the S&T Program.

NRCS 045: We anticipate that task force members would direct their staff's level of involvement accordingly.

NRCS 046: It was referenced in the text on page MR-195.

NRCS 047: Concur. Changes made to the final report.

NRCS 048: It was referenced in the text on page MR-196.

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NRCS 049: The citation has been deleted from the references section.

NRCS 050: Concur. Changes made to the LCA Plan.

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NRCS 051 Pg.Glossary-1 – *Add:* **Adaptive Management – Utilization of existing knowledge, gained from monitoring and other research, to adjust or "fine-tune" management operations of either existing or future projects in order to improve the ability to reach objectives of that project.**

NRCS 052 Pg.Glossary-1 – "Aquaculture – The science and … crawfish, ~~shrimp and trout,~~ under controlled conditions." *[are these applicable in Louisiana?]*

NRCS 053 Pg.Glossary-1 – "Average Annual Habit Units (AAHU) – ~~the total number of species/animals gained or lost as a result of a proposed action, divided by the life of that action~~ **A number representing the changes in fish and wildlife habitat quality and quantity that are expected to result from a proposed wetland restoration project**

NRCS 054 Pg.Glossary-2 – "Chenier Plain – Western part of … rivers **characterized by chenier ridges.** "

Pg.Glossary-5 – "Furbearer – An animal … fur **(mammal)**, especially …"

Pg.Glossary-10 – "Saline Marsh (~~SAW~~ **SAM)** …" *[fresh, intermediate and brackish abbreviations all end in "M"]*

Pg.Glossary-11 – "State Historic Preservation Office (SHPO) – The part … that deals with ~~Indian~~ **Native American** ~~sites~~ and other archaeological/**historic sites** ~~remains~~."

Pg.Glossary-12 – "Trenasse – A small … or marsh **allowing travel by small boats**."

NRCS 055 Pg.Acronyms-1 – *Add:* **AEAM – Adaptive Environmental Assessment and Management** *[how does this differ from EMAP - Environmental Monitoring and Assessment Program?]*

NRCS 056 Pg.Acronyms-1 – "CSVR – Contents-~~TO~~ **to**-Structure Value Ratio" *[not familiar with this, please verify]*

Pg.Acronyms-1 – "FEMA – Department … Defense – Federal …" *[add hyphen]*

Pg.Acronyms-2 – "~~HIS~~ **HSI** – Habitat Suitability Index" *[this automatically changes to "his", and must be manually over-ridden]*

Pg.Acronyms-3 – "NMFS – Department … Commerce – National …" *[add hyphen]*

Pg.Acronyms-3 – "NRCS – Department … Agriculture – Natural …" *[add hyphen]*

Pg.Acronyms-3 – "~~SAW~~ **SAM** - Saline Marsh" *[fresh, intermediate and brackish abbreviations all end in "M"]*

NRCS 051: A more substantive definition has been included in the Glossary defining Adaptive Management.

NRCS 052: Concur. Changes made to the LCA Plan.

NRCS 053: The definition for AAHUs has been revised in the Glossary, though slightly different than the proposed definition in this comment.

NRCS 054: Concur. Changes made to the final report.

NRCS 055: Environmental monitoring is a part of the Adaptive Management process.

NRCS 056: Concur. Changes made to the final report.

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Pg.Acronyms-4 – "USACE-OVEST – United … Engineers – Office …" *[add hyphen]*

Pg.Acronyms-4 – "USFWS – **Department of Interior** – U.S. Fish …"

Pg.Acronyms-4 – "USGS – **Department of Interior** – U.S. Geological …"

Pg.Acronyms-4 – "~~WLO – Wax Lake Outlet~~" *[remove one of these – duplicated]*

Pg.Acronyms-4 – "~~WRU – Water Resource Units~~" *[remove one of these – duplicated]*

Pg.Acronyms-4 – *Add:* **WVA – Wetland Value Assessment**

Pg. Attachment 2-4 - *Add:* **USDA-Soil Conservation Service. 1951. A Report on the Relationship of Agricultural Use of Wetlands to the Conservation of Wetlands in Cameron Parish, Louisiana. USDA-SCS, July, 27+pp**

Pg. Attachment 2-4 - *Add:* **U. S. Fish and Wildlife Service. 1951. Report on the Relationship of Wildlife to Agricultural Drainage and Economic Development of Coastal Marshes in Cameron Parish, Louisiana. USFWS, Oct., 78+pp**

Pg. Attachment 2-4 - *Add:* **McBride, L.M. and Edmund McIlhenny. 1959. Survey and Report of Vermilion Corporation in Opposition to Project (Fresh Water Bayou Canal Project), August, 133pp**

Pg. Attachment 2-5 - *Add:* **Barrett, Barney B., Jerry L. Merrell, Timothy P. Morrison, Marilyn C. Gillespie, Ellen J. Ralph and John F. Burdon. 1978. Study of Louisiana's Major Estuaries and Adjacent Offshore Waters LDWF - Seafood Div., Tech. Bull. No. 27, April, 197pp**

NRCS 056 (Continued)

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NRCS 057

Pg.DPEIS S-3, S.4 CAUSES OF LAND LOSS, para.1, sent.3 - "Many studies have been conducted … Day et al., **2000; Morton 2002**)." *[Literature Cited on pg. DPEIS 8-15 has these listed as "Day et al., **2001**; Morton **et al.** 2002" – note: there are two citations for Morton et al. 2002 - shouldn't one be labeled 2002b?]*

Pg.DPEIS S-9, Table S-2 Comparison of Alternative Plan Feature Combinations and Costs - "**Small** Bayou Lafourche reintroduction" "**Medium** Freshwater Diversion at White's Ditch" *[Bayou Lafourche is labeled as small with a cost of $90,000,000 while White's Ditch diversion is labeled as medium with a cost $35,200,000 ~ less than half of Bayou Lafourche cost; shouldn't these be reversed? or is the cost per cfs that much less cost-efficient at Bayou Lafourche?]*

NRCS 058

NRCS 057: Citations have been corrected in the final report. There is only one Morton 2002 reference.

NRCS 058: See response to NRCS 009.

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NRCS 059 Pg.DPEIS S-10, S.9 THE TENTATIVELY SELECTED PLAN, para.3, sent.1 – "In all … the Penchant Basin Restoration … were found to be ~~beyond~~ **before** the ~~40-year~~ **near-term** implementation window." *[The Penchant Basin is actually scheduled for completion earlier than LCA and therefore dropped because it would already be implemented]*

NRCS 060 Pg.DPEIS S-14, S.10 COMPARISON OF IMPACTS, para.2, sent.3 – "None of the restoration activities would change salinity in the Chenier Plain**, which might become a greater issue if Texas water demands increase**."

NRCS 061 Pg.DPEIS S-19, S.13 CONCLUSIONS AND RECOMMENDATIONS, para.3, sent.1 – "The TSP, with construction ~~costing$$1,961,380,000~~ **costing $1,961,380,000** …"

Pg.DPEIS 1-1, 1.1 GENERAL, para.3, sent.2 – "This complex … (WCSC), 2002)." *[Need to cite in Literature Cited on pg.DPEIS 8-19]*

Pg.DPEIS 1-1, 1.1 GENERAL, para.4, sent.3 – "Louisiana produced … (NMFS, 2003)." *[Need to cite in Literature Cited on pg.DPEIS 8-15]*

Pg.DPEIS 1-6, 1.4 STUDY AREA DESCRIPTION, Subprovince 1:, para.5, sent.1 – "The 46-mile long Chadeleur barrier island …Parishes **and is now over 15 miles from the marshland fringes of Breton Sound Basin**."

Pg.DPEIS 1-10, 1.4 STUDY AREA DESCRIPTION, Subprovince 4:, para.4, sent.4 – "In such cases, the typical result …wetlands**, whereas in the case of the 16,000-acre Pool of the Lacassine NWR it was created to maintain adequate freshwater habitat for migratory waterfowl, as is the 27,000-acre Pool 3 on the Sabine NWR**."

NRCS 062 Pg.DPEIS 1-15, Figure 1-7 – "Location of historic crevasses … *(adapted from Colten 2001)*." *[Need to cite in Literature Cited on pg.DPEIS 8-9]*

NRCS 063 Pg.DPEIS 1-16, 1.5.2.1.4 Sediment Reduction/Vertical …, para.2, sent.2 – "However, upstream … since the 1950s (**Kesel 1988**)."

NRCS 064 Pg.DPEIS 1-17, 1.5.2.1.6 *Relative Sea ~~level~~ Level Change*, para.1, sent.4 – "Recent studies … understood (Morton et al., 2002)." *[Which citation on pg. DPEIS 8-15? - shouldn't one be labeled 2002b?]*

NRCS 065 Pg.DPEIS 1-21, 1.5.2.1.9 Historic Storms and Hurricanes, para.2, sent.2 – "Additional hazards from hurricanes are high … surge waters (Huh 2001, …" *[Need to cite in Literature Cited on pg.DPEIS 8-11]*

NRCS 059: Concur. Verbiage has been added to the final report to clarify the rationale for dropping Penchant Basin and the Lac Des Allemands features from the LCA Plan.

NRCS 060: An action (other than the proposed action) must be authorized for construction to be considered as having future without- or future with-project impacts. There are no Federally authorized actions regarding Texas water demands that would change salinity in the Chenier Plain. If, and when such actions become authorized for construction, further consideration of such an action would be reevaluated as part of the LCA Plan Adaptive Management approach.

NRCS 061: Concur. Editorial change has been implemented.

NRCS 062: Concur. Study has been cited in Literature Cited section.

NRCS 063: Concur. Editorial change has been implemented.

NRCS 064: Concur. Correct citation has been implemented; Literature Cited section has also been revised to include corrected bibliographic citation.

NRCS 065: Response: Concur. Citation has been added to the Literature Cited section.

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Pg.DPEIS 1-21, 1.5.2.1.9 Historic Storms and Hurricanes, para.3, sent.1 – "Hurricanes and tropical storms … (see also section ~~3.24 Economic Resources~~ **3.23 Socio-economic and Human Resources**)." *[There is no section 3.24]* NRCS 066

Pg.DPEIS 1-23, 1.5.2.1.9.1 Hurricane Impacts …, para.1, sent.1 – "Hurricanes and storms impact the natural … (see also section ~~3.6~~ **3.7** Vegetation Resources, section ~~3.7~~ **3.8** Wildlife Resources and section ~~3.10~~ **3.11** Fisheries Resources." NRCS 066

NRCS 067 Pg.DPEIS 1-23, 1.5.2.1.9.1 Hurricane Impacts …, para.1, sent.3 – "Coast 2050 (**LCWCRTF** 1998) …"

Pg.DPEIS 1-23, 1.5.2.1.9.1 Hurricane Impacts …, para.2, sent.1 – "Damages to marsh habitat … Jackson et al., 1992)" *[Need to cite in Literature Cited on pg.DPEIS 8-11]* NRCS 068

Pg.DPEIS 1-23, 1.5.2.1.9.1 Hurricane Impacts …, para.2, sent.2 – "Other wetland damage includes … Jackson et al., 1992; …" *[Need to cite in Literature Cited on pg.DPEIS 8-11]* NRCS 068

NRCS 069 Pg.DPEIS 1-23, 1.5.2.1.9.1 Hurricane Impacts …, para.2, sent.3 – "Storms and hurricanes …zone (Lovelace **and McPherson** 1998)."

Pg.DPEIS 1-23, 1.5.2.1.9.1 Hurricane Impacts …, para.3, sent.1 – "Guntenspergen (1998) reported that …" *[Need to cite in Literature Cited on pg.DPEIS 8-11]* NRCS 070

NRCS 071 Pg.DPEIS 1-23, 1.5.2.1.9.1 Hurricane Impacts …, para.4, sent.6 – "After Hurricane Georges, the … seagrass beds (Turnipseed **et al.**, 1998), which …"

Pg.DPEIS 1-24, 1.5.2.1.9.3 Hurricane and …, para.1, sent.4 – "Lepore (2002) reported coastal storm surges …" *[Need to cite in Literature Cited on pg.DPEIS 8-13]* NRCS 072

NRCS 073 Pg.DPEIS 1-26, 1.5.2.2.4 Construction of Canals …, para.1, sent.9 – "Importantly, dredged material … elevations (Reed **et al.**, 1997)."

Pg.DPEIS 1-26, 1.5.2.2.5 Increased Vessel Traffic …, para.1, sent.4 – "At the barrier shoreline, jetties … (Penland et al., ~~1992~~ **1988**)." *[1992 is not listed on pg.DPEIS 8-15 or 8-16, could this reference be 1988?]*

Pg.DPEIS 1-26, 1.5.2.2.5 Increased Vessel Traffic …, para.1, after sent.4 – *Add:* **The jetty rocks do have a beneficial effect in providing reef-like habitat for smaller organisms.**

Pg.DPEIS 1-27, 1.5.2.2.6 Oil and Gas Infrastructure, para.2, sent.5 – "Importantly, dredged material … elevations (Reed **et al.**, 1997)."

NRCS 066: Concur. Editorial change has been implemented.

NRCS 067: Concur. Editorial change has been implemented, but also includes the State Wetland Authority as authors (WCRA).

NRCS 068: Concur. Citation has been added to Literature Cited section.

NRCS 069: Concur. Editorial change has been implemented.

NRCS 070: Concur. Citation has been added to Literature Cited section.

NRCS 071: Concur. Editorial change has been implemented.

NRCS 072: Concur. Citation has been added to Literature Cited section.

NRCS 073: Concur. Editorial change has been implemented.

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NRCS 074 Pg.DPEIS 1-28, 1.5.2.3 Contributions to Land Loss, para.1, sent.2 – "Turner (1997 and **2001**) claimed …" *[Which citation on pg. DPEIS 8-18? - shouldn't one be labeled 2001b?]*

NRCS 075 Pg.DPEIS 1-28, 1.5.2.3 Contributions to Land Loss, para.1, sent.2 – "Morton et al. (**2002**) claimed …" *[Which citation on pg. DPEIS 8-15? - shouldn't one be labeled 2002b?]*

NRCS 076 Pg.DPEIS 1-28, 1.5.2.5.1 Land Loss Measurement, Overview, para.1, sent.1 – "A recent USGS study estimates … by 2050 (Barras **et al.** 2003)."

NRCS 077 Pg.DPEIS 1-33, 1.5.2.7 Coastal Land Loss In The Future, para.2, sent.2 – "Although recent data (Morton et al., **2002**) suggest …" *[Which citation on pg. DPEIS 8-15? - shouldn't one be labeled 2002b?]*

NRCS 078 Pg.DPEIS 1-33, 1.5.2.7 Coastal Land Loss In The Future, para.4, sent.5 – "If some Louisiana marshes can … land loss**, unless sediment outflow exceeds delivery**."

NRCS 079 Pg.DPEIS 1-40, 1.7.2 Lessons Learned …, para.1, bullet.1 – "Freshwater Re-introduction **and outfall management** – Diverting …"

Pg.DPEIS 1-40, 1.7.2 Lessons Learned …, para.1, bullet.3 – "Hydrologic modification, such as … material banks **or reestablishing ridges or natural banks**, can …"

Pg.DPEIS 1-41, 1.7.2.3 Nearshore and Offshore Sand Resources, Barataria offshore sand resources, para.2, sent.5 – "The researchers also recommend … resource**, with consideration of any historical site contained upon on within this resource**."

Pg.DPEIS 1-41, 1.7.2.3 Nearshore and Offshore Sand Resources, Terrebonne/Timbalier offshore sand resources …, para.1 *~ Above statement regarding historic sites (e.g., ship wreck ~ hence the name "Ship Shoal") should be included in above paragraph or here.*

NRCS 080 Pg.DPEIS 1-41, 1.7.2.3 Nearshore and Offshore Sand Resources, Terrebonne/Timbalier offshore sand resources …, para.1, sent.4 – "It is composed … (Stone, 2000)." *[Need to cite in Literature Cited on pg.DPEIS 8-17]*

NRCS 081 Pg.DPEIS 1-47,1.9.8 Third Delta, para.1, sent.1 – "and also to define and … desired results **since it would need to be constructed through either wetland or prime farmland**."

NRCS 082 Pg.DPEIS 1-47 - *Add*: **1.9.9 Cooperative River Basin Studies - Cooperative River Basin Studies have also been published by NRCS. These contain current and historic descriptions of basins and provide detailed management alternatives of hydrologic units within these basins. The published coastal reports include:**

NRCS 074: Concur. Editorial change has been implemented; correct citation is Turner 2001a.

NRCS 075: Concur. There is only one Morton et. al. 2002 reference; editorial change has been implemented.

NRCS 076: Concur. Editorial change has been implemented.

NRCS 077: Concur. There is only one Morton et. al. 2002 reference; editorial change has been implemented.

NRCS 078: Concur. The sentence has been changed to read as follows: "Wetlands in coastal Louisiana can survive in areas of high relative sea level rise (RSLR) if rates of soil building due to mineral or organic matter deposition exceed the rate of RSLR. If sea level rise or subsidence increases RSLR to the point where a soil accretion deficit develops, these wetland areas will be susceptible to increased rates of loss."

NRCS 079: Concur. Sentence has been changed per recommendation.

NRCS 080: Concur. Citation has been added to Literature Cited section.

NRCS 081: Concur. Sentence has been changed per recommendation.

NRCS 082: Concur. Additional section describing cooperative river basin studies have been added to the chapter.

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Lafourche-Terrebonne, 1986, 89pp
East Central Barataria, 1989, 69pp
Calcasieu-Sabine, 1994, 152pp + App.
Mermentau, 1997, 80pp + App.
Teche-Vermilion, 1999, 175pp + App.

Pg.DPEIS 1-47 - *Add*: **1.9.10 Watershed Reports - Watershed Reports have also been published by NRCS. These contain current and historic descriptions of watershed and provide even detailed management alternatives of hydrologic units within these watersheds. The completed coastal projects include:**

Bayou Folse Watershed, Lafourche Parish, completed 1977
Bell City Watershed, Calcasieu, Cameron and Jefferson Davis Parishes, completed 1994
Cameron Creole Watershed, Cameron Parish, completed 1994
English Bayou Watershed, Calcasieu and Jefferson Davis Parishes, completed 1974
Lake Verret Watershed, Ibserville, Ascension and Assumption Parishes, completed 1994
Seventh Ward Canal Watershed, Vermilion Parish, completed 1971
West Fork of Bayou Lacassine Watershed, Jefferson Davis and Calcasieu Parishes, completed 1977

Watershed reports authorized but not yet complete in coastal areas include:

Bayou Penchant-Lake Penchant, approved 1987
West Fork Bayou L'Ours , approved 1987
Bayou Tigre Watershed, Iberia and Vermilion Parishes, planning authorized 2002
Hebert Canal Watershed, Vermilion Parish, planning authorized 2002
Sabine-Black Bayou Watershed, planning authorized 1995

NRCS 082 (Continued)

NRCS 083

Pg.DPEIS 2-3, 2.1.1 Scientific and Technological Uncertainties, para.1, sent.1 – "Scientists have documented the importance … 1989; Keithly, 1991; …" *[Need to cite in Literature Cited on pg.DPEIS 8-17]*

NRCS 084

Pg.DPEIS 2-3, 2.1.1 Scientific and Technological Uncertainties, para.1, sent.1 – "Scientists have documented the importance … 1989; Keithly, 1991; Herke, 1993; **Olsen and Noble, 1976;** Michot, ~~1993~~ **1996**), estuarine …"

NRCS 085

Pg.DPEIS 2-3, 2.1.1 Scientific and Technological Uncertainties, para.1, sent.2 – "This recognition has … chemical (Mendelssohn et al., 1981; … and ecological (Montague et al., 1987) processes …" *[Need to cite both of these in Literature Cited on pg.DPEIS 8-17]*

NRCS 086

Pg.DPEIS 2-3, 2.1.1 Scientific and Technological Uncertainties, para.2, sent.6 – "These efforts **are an extension of the existing monitoring program used** to identify "lessons learned" … worked" **on projects that have been built long enough to provide any useful data.**" *[major conclusions on "Adaptive Management" have*

NRCS 083: Concur. Citation has been added to Literature Cited section.

NRCS 084: Concur. Sentence has been changed per recommendation.

NRCS 085: Concur. Citations for both works have been added to Literature Cited section.

NRCS 086: Concur. Sentence has been changed per recommendation.

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been that WVA process, etc. is already being adaptively managed and only early projects have data, albeit limited, that could even be examined]

Pg.DPEIS 2-4, 2.2.1.1 Coordination Teams, para.2, bullet.2 – "Department of Interior - **Fish and Wildlife Service** (USFWS)" *[consistency]*

Pg.DPEIS 2-4, 2.2.1.1 Coordination Teams, para.2, bullet.4 – "Department of Commerce - **National Marine Fisheries Service** (NMFS)" *[consistency]*

Pg.DPEIS 2-4, 2.2.1.1 Coordination Teams, para.2, bullet.5 – "Department of Interior - **Geological Survey** (USGS)" *[consistency]*

NRCS 086 (Continued)

NRCS 087 Pg.DPEIS 2-7, 2.2.3 Environmental Operating Principles ~ *[Somewhere in the LCA process the well established Wetland Value Assessment (WVA) procedures need to be incorporated in order to, at least, make comparisons to the CWPPRA projects using this peer-reviewed approach]*

Pg.DPEIS 2-9, 2.2.4 Guiding Principles, bullet 9 – "addressing such invasions … project effectiveness**, such as vegetative plantings**."

Pg.DPEIS 2-13, 2.3.3 Phase III – Develop and Evaluate Restoration Features, para.2, sent.2 – "The fourteen years …information to build on **with basic component costs developed in the CWPPRA Engineer Work Group**."

Pg.DPEIS 3-5, 3.1.2.2 Biologic Diversity and Delta Switching, para.1, sent.6 – "The inshore shrimp … delta (Turner, ~~1977~~ **1979**)." *[Listed as 1979 in reference]*

NRCS 088

NRCS 089 Pg.DPEIS 3-11, 3.3.1.1 Trinity Shoal, Outer Shoal, …, para.1, sent.1 – "Kulp (2003) describes …" *[Need to cite in Literature Cited on pg.DPEIS 8-12]*

Pg.DPEIS 3-11, 3.3.1.1 Trinity Shoal, Outer Shoal, …, para.6, sent.2 – "An additional 123 million … shoal (Penland et al., 1991)." *[Need to cite in Literature Cited on pg.DPEIS 8-16]*

NRCS 090

NRCS 091 Pg.DPEIS 3-17, 3.5.1 Importance of Louisiana's Barrier System, para.3, sent.2 – "Barrier systems help reduce wave … and Sallanger, 1992) **as long as volume deposited on the backshore is less than the volume of material lost from the beach face (Dingler and Reiss,1990)**."

Pg.DPEIS 3-18, 3.5.1 Importance of Louisiana's Barrier System, after para.1, sent. 2 – *Insert line space after:* "Appendix D: Louisiana … discussion of this resource."

NRCS 092

NRCS 093 Pg.DPEIS 3-18, 3.5.1 Importance of Louisiana's Barrier System, para.5, sent.3 – "In addition to providing critical … human habitat (see Grambling et al., 2003; …)." *[Need to cite in Literature Cited on pg.DPEIS 8-11]*

NRCS 087: Specifying or requiring the use of particular habitat evaluation procedures, such as the WVA, is not appropriate in that it may preclude the use of other evaluation procedures. The LCA team would utilize the most appropriate and best science in its comparisons with other projects.

NRCS 088: Concur. Sentence has been changed per recommendation.

NRCS 089: Incorrect citation. Citation has been corrected Penland et. al. 1986.

NRCS 090: Incorrect citation. Revised sentence for correct citation Penland et. al. 1986.

NRCS 091: The issue regarding the deposition on backshore of the barrier island system has been included in the FPEIS in Section 3.

NRCS 092: Concur. Sentence has been changed per recommendation.

NRCS 093: Citation was not appropriate; reference is to Appendix D only. Sentence has been changed to remove citation.

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NRCS 094 Pg.DPEIS 3-18, 3.5.2 Historic and Existing Conditions, para.1, sent.4 – "A series of reports entitled … Isle Dernieres (Ritchie et al., 1989), the Plaquemines Shoreline (Ritchie et al., 1990), the Chandeleur Islands (Ritchie et al., 1992), and the Bayou Lafourche Barrier Shoreline (Ritchie et al., 1995)." *[Need to cite all of these in Literature Cited on pg.DPEIS 8-16]*

NRCS 095

Pg.DPEIS 3-20, 3.5.3 Barrier Island Erosion, , para.1, sent.2 – "However, the knowledge … for restoration **and site-specific evaluation**."

Pg.DPEIS 3-23, 3.6 BARRIER REEF RESOURCES, para.1, sent.7 – "This extensive … Inc., ~~1977~~ **1976**) and a …" *[listed as 1976 in Literature Cited on pg.DPEIS 8-8]*

Pg.DPEIS 3-23, 3.6.1 Historic and Existing Conditions, para.1, sent.2 – "Today the Atchafalaya-Vermilion … Gulf of Mexico (Orlando **et al.** 1993)."

Pg.DPEIS 3-26, 3.7.1 Historic Conditions, para.1, 1 – Louisiana's coastal vegetative landscape … Visser et al. ~~1997~~ **1998**, 1999, 2000; …" *[listed as 1998 in Literature Cited on pg.DPEIS 8-19]*

Pg.DPEIS 3-30, 3.7.1.3 Factors Driving Changes in Vegetative Resources, Drainage for Development and Agricultural Use: sent.1 – "Sizable tracts … or agronomic use **early in the last century**."

NRCS 096 Pg.DPEIS 3-30, 3.7.1.3 Factors Driving Changes in Vegetative Resources, Drainage for Development and Agricultural Use: sent.2 – "Wetland soils … systems (USDA, 1977; Okey ~~1981~~ **1918a**, ~~(1918~~ **1918b**)." *[see listings in Literature Cited on pg.DPEIS 8-15]*

NRCS 097 Pg.DPEIS 3-30, 3.7.1.3 Factors Driving Changes in Vegetative Resources, Invasive Species: para.2, sent.1 – "Invasive aquatic … aquatic plants (Chabreck, **1972**)," *[which is this 1972a or 1972b]*

NRCS 098 Pg.DPEIS 3-31, 3.7.1.3 Factors Driving Changes in Vegetative Resources, Invasive Species: para.2, sent.2 – "In many cases … activities (Westbrooks, 1998)." *[Need to cite in Literature Cited on pg.DPEIS 8-19]*

Pg.DPEIS 3-31, 3.7.1.3 Factors Driving Changes in Vegetative Resources, Invasive Species: para.4, sent.3 – "Cogongrass has been ... parts of Louisiana (Center for Aquatic & Invasive Plants, 2000), and …" *[Need to cite in Literature Cited on pg.DPEIS 8-8]*

NRCS 099 Pg.DPEIS 3-34, 3.7.2 Existing Conditions, para.2, bullet.2 Cropland/grassland: sent.2 – "Predominate crops include … Extension Service, ~~2002~~ **2001**)." *[listed as 2001 in Literature Cited on pg.DPEIS 8-13]*

NRCS 094: Concur. Citations have been added to Literature Cited section.

NRCS 095: Concur. Sentence has been changed per recommendation.

NRCS 096: Concur. Sentence and Literature Cited section has been changed per recommendation.

NRCS 097: Incomplete citation. Proper citation is 1972a and it has been added to text.

NRCS 098: Concur. Citations have been added to Literature Cited section.

NRCS 099: Concur. Sentence has been changed per recommendation.

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NRCS 100 Pg.DPEIS 3-36, Figure 3-14 Rare, threatened … Louisiana (*from Louisiana Natural Heritage Program*) *[Need to cite in Literature Cited on pg.DPEIS 8-13]*

NRCS 101 Pg.DPEIS 3-39, 3.8.1 Existing and Historic Conditions, para.1, sent.3 – "One hundred ninty-seven colonies … survey (Michot **et al.** 2003)."

NRCS 102 Pg.DPEIS 3-39, 3.8.1.1 Subprovince 1 – Pontchartrain … para.2, sent.4 – "This decline is largely … muskrat and nutria (Kerlin, 1979)." *[Need to cite in Literature Cited on pg.DPEIS 8-19]*

NRCS 103 Pg.DPEIS 3-41, 3.8.2 Invasive Mammalian Species, para.2, sent.3 – "However, when some fur farms … hyacinth (LeBlanc, ~~D.L.~~ 1994)."

NRCS 104 Pg.DPEIS 3-42, 3.9.2.1 Phytoplankton, para.2, sent.7 – "Runoff from fertilized **urban and** agricultural fields and …"

NRCS 105 Pg.DPEIS 3-42, 3.9.2.1 Phytoplankton, para.2, sent.10 – "Phytoplankton production is the major … systems (Day **et al.**, 1989)."

Pg.DPEIS 3-43, 3.9.2.1 Phytoplankton, para.3, sent.4 – "Red tide populations well below the fish kill … public ~~heath~~ **health** through…"

Pg.DPEIS 3-58, 3.14.3.1 Water Use and Supply, Historic and Existing Conditions, para.2, sent.1 – "The Mississppi River and some … 96 percent (2,800 Mgal/d) **(million gallons per day)** of the total surface withdrawals." *[spell out at first usage]*

Pg.DPEIS 3-58, 3.14.3.1 Water Use and Supply, Historic and Existing Conditions, para.3, sent.1 – "During 2000, about 3,000 Mgal/d ~~(million gallons per day)~~, of freshwater, were …" *[spell out at first usage only]*

Pg.DPEIS 3-60, 3.14.3.1 Water Use and Supply, Historic and Existing Conditions, after para.1 – *Insert line space before para.2:* "No major sources …"

Pg.DPEIS 3-58, 3.16.2 GULF HYPOXIA, Existing Conditions, para.1, sent.3 – "During the summer of 2003, … 10 years (3,300 mi^2) ~~,~~ (Rabalais 2003)."

Pg.DPEIS 3-67, 3.17.1 HISTORIC AND CULTURAL RESOURCES, Types of Cultural Resources, para.5, sent.4 – "Some people continue to … of southwest Louisiana **(Cameron and Vermilion parishes are the top two cattle producing parishes in Louisiana)**."

Pg.DPEIS 4-1, Chapter 4 ENVIRONMENTAL CONSEQUENCES, para.2, sent.8 – "For example, the incremental … restoration ~~of~~ at several localized …"

NRCS 100: Concur. Citations have been added to Literature Cited section.

NRCS 101: Concur. Sentence has been changed per recommendation.

NRCS 102: Citation has been added in Section 8.

NRCS 103: Concur. Sentence has been changed per recommendation.

NRCS 104: The sentence has been changed to read as follows: "Runoff from fertilized areas, including lawns, golf courses, and agricultural fields, …"

NRCS 105: Concur. Sentence has been changed per recommendation.

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NRCS 105 (Continued)

Pg.DPEIS 4-9, Table 4-1, Fisheries Resources, Present Action- *Add*: **US: Formation of National Marine Fisheries Service**

Pg.DPEIS 4-20, 4.2.4 Restoration Opportunities – Cumulative Impacts, para.6, after sent.1 – Add sentence: **The unknown longevity of sand resource may require re-mining to maintain proper project configuration.**

NRCS 106

Pg.DPEIS 4-20, 4.2.4 Restoration Opportunities – Indirect Impacts, para.1, after bullet.2 - *Add bullet:* **restore nesting and resting habitat for migratory birds (Kopman 1907, 1908).** *[note: many parts of barrier islands were wooded in the early 1900's, and wooded species, even low growing ones, increase storm protection]*

NRCS 107

Pg.DPEIS 4-33 - *Add*: **4.5.1.3 Created Reefs** ~ *use of rock along barrier headlands, etc. captures function of reef for small organisms providing valuable fishery habitat and should be at least mentioned at this point in the DPEIS*

NRCS 108

Pg.DPEIS 4-34, 4.6.1 Future Without-Project …, below Table 4-3, para.1, sent.1 – "In a future … coast wide." *[Where is the table that shows existing wetland habitat acreage by subprovince? Needed to be able to compare these figures]*

NRCS 109

Pg.DPEIS 4-36, 4.6.1.3 Subprovince3- Teche/Vermilion, …, para.1, sent.2 – "The majority of direct loss … from **north to south.**" *[verify: should this be south to north?]*

Pg.DPEIS 4-38, 4.6.1.4 Subprovince4- Calcasieu/Sabine …, after para.3 - *Insert line space before para.4:* "A net decrease of 10 percent …"

Pg.DPEIS 4-39, 4.6.1.4 Subprovince4- Calcasieu/Sabine …, para.2, sent.1 – "Nearly all of saline marsh habitat … predicted to be converted to brackish marsh …" *[How is this possible since neither Sabine or Calcasieu Ship Channels are expected to freshen, and they influence adjacent marshes – this not counting on freshwater demands that are ever increasing]*

NRCS 110

Pg.DPEIS 4-42, 4.6.2 Restoration Opportunities – Direct Impacts, para.4 , sent.3 – "In addition, best management … native plant species**, including woodies,** for all LCA projects."

NRCS 111

Pg.DPEIS 4-47, 4.7.1.1 Coast wide, para.2, after sent.1 - *Add*: **Executive Order 13186, signed by the President on January 10, 2001, specifies that all Federal agencies must include protection of migratory bird habitat in their planning efforts.**

NRCS 112

Pg.DPEIS 4-54, 4.9.1 BENTHIC RESOURCES, Future Without-Project …, para.2, sent.1 – "Day et al., (1993) indicate the preferences …" *[Need to cite in Literature Cited on pg.DPEIS 8-19]*

NRCS 106: Concur. New bullet has been added per recommendation.

NRCS 107: Concur. New section has been added per recommendation.

NRCS 108: Concur. Table has been revised for comparison of existing wetland habitat to Future Without-Project habitats.

NRCS 109: Concur. Sentence has been changed per recommendation.

NRCS 110: Concur. The sentence has been changed to state "woody species."

NRCS 111: Concur. Sentence has been added to text per recommendation.

NRCS 112: The citation Day et al. (1989) has been corrected in text.

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NRCS 113

Pg.DPEIS 4-56, 4.10.1 FISHERIES RESOURCES, Future Without-Project …, para.5, sent.2 – "As marsh loss occurs, a maximum … reached (Browder **et al.** 1985)."

Pg.DPEIS 4-56, 4.10.1 FISHERIES RESOURCES, Future Without-Project …, para.5, sent.4 – "Because fishery productivity … interface (Faller 1979, Dow **et al.** 1985, Zimmerman …."

Pg.DPEIS 4-77, 4.14.1 WATER QUALITY RESOURCES, Future Without-Project …, para.1, sent.2 – "Some of these activities … restoration projects, **various NRCS programs (e.g., Coastal WRP)**, and LDNR projects; …"

NRCS 114

Pg.DPEIS 4-80, 4.14.2 Comparision of Near-Term …, para.4, sent.6 – "Adaptive management **through monitoring efforts** would be important …"

NRCS 115

Pg.DPEIS 4-86, 4.16.2 Restoration …, para.2, sent.1 – "A cultural resources evaluation of each … projects **including borrow areas** would need …"

Pg.DPEIS 4-97, 4.20.2 Restoration …, para.1, sent.3 – "Therefore, these issues shall be addressed … nesting birds (see Martin and Lester, ~~1990~~ **1991; Mendoza and Ortiz, 1984**)." *[Use date of publication not date of study; need to cite in Literature Cited on pg.DPEIS 8-14]*

Pg.DPEIS 4-97, 4.20.2 Restoration …, para.2, sent.4 – "Therefore these issues shall be addressed … nesting birds (see Martin and Lester, ~~1990~~ **1991**)." *[note: there are two headings listed as 4.20.2]*

Pg.DPEIS 4-97, 4.20.3 Restoration …, para.1, sent.3 – "Therefore these issues shall be addressed … nesting birds (see Martin and Lester, ~~1990~~ **1991**)."

Pg.DPEIS 4-122, 4.23.1.1 Federal, State, ... Efforts, General, para.1, sent.7 – "Wetland acreage created … UNO 2001) which …" *[Need to cite in Literature Cited on pg.DPEIS 8-19]*

Pg.DPEIS 4-123, 4.23.1.1 Vegetation … Projects - *Add:* **The NRCS Plant Materials Center located near Golden Meadow was established specifically for development and assessment of species varieties for use in coastal marsh habitats.**

NRCS 116

Pg.DPEIS 4-126, 4.23.1.1 Non-Government …, para.5, sent.1 – "Ducks Unlimited, Incorporated, through … with Chad J. Courville, …" *[Need to cite in Literature Cited on pg.DPEIS 8-9 since other pers. comm. Have also been cited ~ consistency]*

NRCS 117

Pg.DPEIS 4-126, 4.23.1.1 Non-Government …, para.6, sent.1 – "The Wisner Foundation, in a community … diversions (The Lafayette Daily Advertiser, May 16, 2003)." *[Need to cite in Literature Cited on pg.DPEIS 8-12]*

NRCS 113: Concur. Sentence has been added to text per recommendation.

NRCS 114: The sentence has been changes to read "Monitoring efforts and Adaptive Management actions would be important…"

NRCS 115: Concur. Sentence has been added to text per recommendation.

NRCS 116: Concur. Personal communication has been added Literature Cited section.

NRCS 117: Citation is referenced in Section 8.

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NRCS 118

Pg.DPEIS 4-129, 4.23.2.1 Other Cumulative Impacts: ... Land Loss, General, para.1, sent.1 – "The following … Penland et al. (**2000**) and …" *[Verify date – it may be 1990, if no need to cite in Literature Cited on pg.DPEIS 8-15]*

NRCS 119

Pg.DPEIS 4-129, 4.23.2.1 Other Cumulative Impacts: ... Land Loss, General, para.1, sent.1 – "The HILCP study … Service (now ~~NMFS~~ **NOAA – Fisheries**), NRCS, USEPA, …

NRCS 120

Pg.DPEIS 4-129, 4.23.2.2 Other Cumulative Impacts: ... Land Loss, Delta Plain- … Loss Process, para.1, sent.1 – "Penland et al., (**2000**) provide …" *[Refer to comment above]*

Pg.DPEIS 4-129, 4.23.2.2 Other Cumulative Impacts: ... Land Loss, Delta Plain- … Loss Process, para.2, sent.1 – "Table 4-9 (adapted from Penland et al., (**2000**) displays the acres …" *[Refer to comment above]*

Pg.DPEIS 4-129, 4.23.2.2 Other Cumulative Impacts: ... Land Loss, Delta Plain- … Loss Process, para.2, sent.2 – "Penland et al., (**2000**) identify two …" *[Refer to comment above]*

Pg.DPEIS 4-130, Table 4-9 Cumulative Coastal Land Loss in the Delta Plain Between 1932 and 1990. (Source: Penland et al., **2000**) *[Refer to comment above]*

NRCS 121

Pg.DPEIS 4-133, 4.23.2.2 Other Cumulative Impacts: ... Land Loss, Chenier Plain- … Loss Process, Calcasieu-Sabine Basin, para.2, sent.1 – "Hydrology in this basin has been … low-salinity estuary**, at times creating a circulation pattern between Calcasieu and Sabine Lakes by way of the GIWW**; creating …"

Pg.DPEIS 4-133, 4.23.2.2 Other Cumulative Impacts: ... Land Loss, Chenier Plain- … Loss Process, Calcasieu-Sabine Basin, *Impacts*, Habitat: para.1, sent.4 – "In contrast, natural resource management … Cameron-Creole Watershed Project**, which is showing a reversal to damages done by the earlier increased salinity (Cameron-Creole Watershed Monitoring Report 1988, 1993, 1998, and unpublished 2003)**."

Pg.DPEIS 4-135, 4.25 SUMMARY OF IMPACTS … (TSP), para.2, sent.4 – "Disturbance of large areas … dynamics **and require further examination**."

NRCS 122

Pg.DPEIS 8-7 to 8-20, 8.4 LITERATURE CITED – *Consistency needed on all authors: suggest using lastname and initials on all authors (never "et al." in this section)*

NRCS 123

Pg.DPEIS 8-8, 8.4 LITERATURE CITED – "~~Burk and Associates, Inc. 1976. Unique ecological characteristics … 39pp.~~" *[Delete one – duplicate listing]*

NRCS 118: Concur. Citation included in Literature Cited section.

NRCS 119: NOAA Fisheries has, once again, become NMFS.

NRCS 120: Concur. Citation has been included in Literature Cited section.

NRCS 121: Concur. Sentence has been added to text per recommendation.

NRCS 122: Concur. Complete citation has been included per recommendation.

NRCS 123: Concur. Duplicate listing deleted.

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NRCS 124 Pg.DPEIS 8-8, 8.4 LITERATURE CITED – "Chabreck, Robert H. ~~1972~~ **1972a**. Vegetation, water and … 664pp."

NRCS 124 Pg.DPEIS 8-8, 8.4 LITERATURE CITED – "Chabreck, Robert H. ~~1972~~ **1972b**. Vegetation, Water and … 72pp."

NRCS 125 Pg.DPEIS 8-8, 8.4 LITERATURE CITED – *Insert space between* "Chabreck, R.H. … 2001. …CD ROM" *and* "Challstrom, Charlie. 2002. …"

NRCS 126 Pg.DPEIS 8-9, 8.4 LITERATURE CITED – *Add:* **Courville, Chad J. ???? pers. comm.**

NRCS 127 Pg.DPEIS 8-9, 8.4 LITERATURE CITED – "Cowardin et al., 1979." *[Verify citing in text, I did not notice it]*

NRCS 128 Pg.DPEIS 8-9, 8.4 LITERATURE CITED – "Cuomo, R.F. 1984." *[Verify citing in text, I did not notice it]*

NRCS 129 Pg.DPEIS 8-9, 8.4 LITERATURE CITED – *Add:* **Day, et al. 1993**

NRCS 130 Pg.DPEIS 8-10, 8.4 LITERATURE CITED – *Add:* **Dingler, J.R. and T.E. Reiss. 1990. Cold-Front Driven Storm Erosion and Overwash in the Central Part of the Isles Dernieres, a Louisiana Barrier-Island Arc. Marine Geology, 91:195-206**

NRCS 130 Pg.DPEIS 8-9, 8.4 LITERATURE CITED – "Dow, et al., 1985." *[Verify citing in text, I did not notice it]*

NRCS 130 Pg.DPEIS 8-9, 8.4 LITERATURE CITED – "Dunbar, J.B. 1990." *[Verify citing in text, I did not notice it]*

NRCS 131 Pg.DPEIS 8-11, 8.4 LITERATURE CITED – *Insert space between* "Gagliano et al. 1972. Environmental atlas…" *and* "Gagliano, S.M. 1998. …"

NRCS 132 Pg.DPEIS 8-11, 8.4 LITERATURE CITED – "Gagliano and van Beek. 1975." *[Verify citing in text, I did not notice it]*

NRCS 133 Pg.DPEIS 8-11, 8.4 LITERATURE CITED – "Hartley et al., 2000." *[Verify citing in text, I did not notice it]*

NRCS 134 Pg. DPEIS 8-12, 8.4 LITERATURE CITED – *Add:* **The Lafayette Daily Advertiser, May 16, 2003**

NRCS 135 Pg.DPEIS 8-12, 8.4 LITERATURE CITED – "Karen, C.W. 1979." *[Verify citing in text, I did not notice it]*

Pg. DPEIS 8-15, 8.4 LITERATURE CITED – *Add:* **Keithly, 1991** *[see pg.DPEIS 2-3]*

NRCS 124: Concur. Date of citation has been corrected per recommendation.

NRCS 125: Concur. Sentence has been added to text per recommendation.

NRCS 126: Concur; citation not provided in Literature Cited section. Citation included in Literature Cited section.

NRCS 127: Cowardin et. al. is cited on Section 3.

NRCS 128: Cuomo (1984) is cited on Section 3.

NRCS 129: 1993 citation has been deleted and corrected to Day et. al. 1989.

NRCS 130: Concur. Citation has been added to Literature Cited Section.

NRCS 131: Concur. Sentence has been revised per recommendation.

NRCS 132: Reference is cited in Section 3.

NRCS 133: Concur. Citation has been deleted from Literature Cited Section.

NRCS 134: Reference is cited in Section 8.

NRCS 135: Karen 1979 reference is not listed in Literature Cited section.

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NRCS 136 Pg. DPEIS 8-15, 8.4 LITERATURE CITED – *Add:* **Kopman, Henry H.1907. Report of Exploration of Seabird Colonies. Bird Lore ix:233-240.**

NRCS 136 Pg. DPEIS 8-15, 8.4 LITERATURE CITED – *Add:* **Kopman, Henry H.1908. Inspection of Breton Island Reservation and East Timbalier Reservation, Louisiana. Bird Lore x:229-231.**

NRCS 137 Pg.DPEIS 8-12, 8.4 LITERATURE CITED – "Krawiecn, W. 1966." *[Verify citing in text, I did not notice it]*

NRCS 138 Pg.DPEIS 8-12, 8.4 LITERATURE CITED – "Kulp et al., 2002." *[Verify citing in text, I did not notice it]*

NRCS 138 Pg.DPEIS 8-12, 8.4 LITERATURE CITED – "Kulp et al., 2001." *[Verify citing in text, I did not notice it]*

NRCS 138 Pg.DPEIS 8-12, 8.4 LITERATURE CITED – "Kulp and Penland, 2001." *[Verify citing in text, I did not notice it]*

NRCS 138 Pg.DPEIS 8-12, 8.4 LITERATURE CITED – "Kulp and Penland, 2002." *[Verify citing in text, I did not notice it]*

NRCS 139 Pg.DPEIS 8-12, 8.4 LITERATURE CITED – "Laiche, G. 1993." *[Verify citing in text, I did not notice it]*

NRCS 140 Pg.DPEIS 8-13, 8.4 LITERATURE CITED – "Linscombe et al. 1997." *[Verify citing in text, I did not notice it]*

NRCS 141 Pg.DPEIS 8-14, 8.4 LITERATURE CITED – *Add:* **Mendoza, Carlos H. and Rene Ortiz. 1984. Features of Spoil Banks vs. Utilization by Birds: Upper Laguna Madre of Texas, in Proc. Fourth Coastal Marsh and Estuary Management Symp., p153-164**

NRCS 142 Pg.DPEIS 8-14, 8.4 LITERATURE CITED – "Michot et al. 1993." *[Verify citing in text, I did not notice it]*

NRCS 143 Pg.DPEIS 8-14, 8.4 LITERATURE CITED – "Michot et al. 2003." *[Verify citing in text, I did not notice it]*

NRCS 144 Pg.DPEIS 8-14, 8.4 LITERATURE CITED – "Morgan. 1972." *[Verify citing in text, I did not notice it]*

NRCS 145 Pg.DPEIS 8-14, 8.4 LITERATURE CITED – *Insert space between* "McKee, K.L. and I.A. Mendelssohn. 1989. …" *and* "Mendelssohn and McKee. 1988. …"

NRCS 136: Concur. Citation has been added to the Literature Cited Section.

NRCS 137: Concur. Citation has been deleted from the Literature Cited Section.

NRCS 138: Reference has been cited in Section 3.

NRCS 139: Reference cited in Section 3.

NRCS 140: Reference cited in Section 3. Citations corrected in text for Linscombe et. al. (1997a and 1997b).

NRCS 141: Concur. Citation has been added to the Literature Cited Section.

NRCS 142: Michot and Nault 1993 not referenced in text. Reference citation deleted from Literature Cited.

NRCS 143: Reference is incorrectly cited in text in Section 3 as Michot (2003). Reference citation corrected in Section 3: Michot et. al. (2003).

NRCS 144: Concur. Citation has been deleted from Literature Cited Section.

NRCS 145: Concur. Sentence has been modified per recommendation.

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NRCS 146

Pg. DPEIS 8-14, 8.4 LITERATURE CITED – *Add:* **Mendelssohn et al., 1981** *[see pg.DPEIS 2-3]*

Pg. DPEIS 8-14, 8.4 LITERATURE CITED – *Add:* **Montague et al., 1987** *[see pg.DPEIS 2-3]*

Pg. DPEIS 8-15, 8.4 LITERATURE CITED – *There are two "Morton, R.A., Buster, N.A. and Krohn, M.D. 2002." Should not one of them be listed as 2002b?*

Pg. DPEIS 8-15, 8.4 LITERATURE CITED – *Add:* **National Recreation Lakes Study Commission, 1999**

NRCS 147

Pg.DPEIS 8-15, 8.4 LITERATURE CITED – "Neill and Deegan. 1986." *[Verify citing in text, I did not notice it]*

NRCS 148

Pg. DPEIS 8-15, 8.4 LITERATURE CITED – "Okey, C.W. ~~1918~~ **1918a**. The Wet …"

Pg. DPEIS 8-15, 8.4 LITERATURE CITED – "Okey, C.W. ~~1918~~ **1918b**. The Subsidence of Muck …"

NRCS 149

Pg. DPEIS 8-15, 8.4 LITERATURE CITED – *Add:* **Olsen, Robert B. and Robert E. Noble. 1976. Spoil Bank Avifauna in the Intermediate Marshes of Southwestern Louisiana, Proc. Southeast. Assoc. Game & Fish Comm., 30:575-580.**

NRCS 150

Pg.DPEIS 8-15, 8.4 LITERATURE CITED – "Penland et al. 1988." *[Verify citing in text, I did not notice it]*

NRCS 151

Pg.DPEIS 8-16, 8.4 LITERATURE CITED – "Penland et al. 1988." *[Verify citing in text, I did not notice it]*

NRCS 152

Pg. DPEIS 8-16, 8.4 LITERATURE CITED – "Personal communication …" *[change to alphabetical listing by last name]*

NRCS 153

Pg. DPEIS 8-16, 8.4 LITERATURE CITED – *Add:* **Ritchie et al., 1989. Isles Dernieres … LGS**

Pg. DPEIS 8-16, 8.4 LITERATURE CITED – *Add:* **Ritchie et al., 1990. Plaquemines shoreline … LGS**

Pg. DPEIS 8-16, 8.4 LITERATURE CITED – *Add:* **Ritchie et al., 1992. Chandeleur Islands … LGS**

Pg. DPEIS 8-16, 8.4 LITERATURE CITED – *Add:* **Ritchie et al., 1995. Bayou Lafourche Barrier Shoreline … LGS**

NRCS 146: Reference has been added to Literature Cited Section.

NRCS 147: Reference is cited in Section 3.

NRCS 148: Concur. Citation has been edited per recommendation.

NRCS 149: Concur. Citation has been added to the Literature Cited Section.

NRCS 150: Reference citation corrected in Section 2.

NRCS 151: Reference citation corrected in Section 2.

NRCS 152: Concur. Citations have revised by last name changed to alphabetical listing by last name in the Literature Cited Section.

NRCS 153: Concur. Citation has been added to the Literature Cited Section.

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NRCS 154 Pg. DPEIS 8-17, 8.4 LITERATURE CITED – "SCORP 1993 - 1998." *[Verify citing in text, I did not notice it]*

NRCS 155 Pg. DPEIS 8-17, 8.4 LITERATURE CITED – "The Lafayette Advertiser …" *[alphabetize by Lafayette not "The"]*

NRCS 156 Pg. DPEIS 8-18, 8.4 LITERATURE CITED – *There are two "Turner, R.E. 2001." Should not one of them be listed as 2001b?*

NRCS 157 Pg. DPEIS 8-18, 8.4 LITERATURE CITED – "U.S. Army Corps of Engineers. 1983." *[Verify citing in text, I did not notice it]*

Pg. DPEIS 8-18, 8.4 LITERATURE CITED – "U.S. Army Corps of Engineers. 1984." *[Verify citing in text, I did not notice it]*

NRCS 158 Pg. DPEIS 8-18, 8.4 LITERATURE CITED – "U.S. Army Corps of Engineers. 1987." *[Verify citing in text, I did not notice it]*

Pg. DPEIS 8-18, 8.4 LITERATURE CITED – "U.S. Army Corps of Engineers. 1996." *[Verify citing in text, I did not notice it]*

NRCS 159 Pg. DPEIS 8-18, 8.4 LITERATURE CITED – "U.S. Army Corps of Engineers. 2002." *[Verify citing in text, I did not notice it]*

Pg. DPEIS 8-18, 8.4 LITERATURE CITED – "U.S. Army Corps of Engineers. 2002." *[Verify citing in text, I did not notice it]*

NRCS 160 Pg. DPEIS 8-18, 8.4 LITERATURE CITED – *Add:* **U.S. Census. 2000.**

NRCS 161 Pg. DPEIS 8-18, 8.4 LITERATURE CITED – *Add:* **UNO 2001**

NRCS 162 Pg. DPEIS 8-19, 8.4 LITERATURE CITED – "Van Sickle et al. 1976." *[Verify citing in text, I did not notice it]*

NRCS 163 Pg. DPEIS 8-19, 8.4 LITERATURE CITED – "Wang 1988." *[Verify citing in text, I did not notice it]*

NRCS 164 Pg. DPEIS 8-19, 8.4 LITERATURE CITED – "Wilson and Roberts 2000." *[Verify citing in text, I did not notice it]*

NRCS 165 Pg. DPEIS 8-19, 8.4 LITERATURE CITED – "Williams et al. 1989." *[Verify citing in text, I did not notice it]*

Pg. DPEIS 8-20, 8.4 LITERATURE CITED – "Williams et al. 2002." *[Verify citing in text, I did not notice it]*

NRCS 154: Citation is referenced in Section 3.

NRCS 155: Concur. Citation is properly referenced and alphabetized.

NRCS 156: Concur. Citations have been properly referenced 2001a, 2001b.

NRCS 157: Citation is referenced in Section 1 and have been corrected.

NRCS 158: Concur. Citation has been deleted

NRCS 159: Citation is referenced in Section 1 and has been corrected.

NRCS 160: Reference citation has been added to Literature Cited Section.

NRCS 161: Citation has been corrected to USACE 2001.

NRCS 162: Citation is referenced in Section 3.

NRCS 163: Wang 1988 citation added in Section 1.

NRCS 164: Citation is referenced in Section 3.

NRCS 165: Concur. Reference has been included in Section 3.

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NRCS 166 Pg. DPEIS 8-20, 8.4 LITERATURE CITED – "www.yosemite.epa.gov/…." *[Verify citing in text, I did not notice it]*

APPENDIX A – Science and Technology Plan

NRCS 167 Pg. A-1, 1.1 Background, para.1, sent.1 – "Scientists have long … to Restore Coastal Louisiana, **1989**; …" *[should this be 1998?, if so, need to change on 6.0 Literature Cited pg.A-58]*

NRCS 168 Pg. A-1, 1.1 Background, para.1, sent.2 – "This recognition has … chemical (Mendelssohn ~~el~~ **et** al., 1981; …history of scientific" *[Need to cite in Literature Cited on pg.A-59]*

NRCS 169 Pg. A-2, 1.1 Background, para.2, sent.4 – "The LCA Project Delivery … management reports **based upon the monitoring results that are part of the CWPPRA process** prepared to assess … projects."

NRCS 170 Pg. A-2, 1.1 Background, para.2, sent.5 – "These efforts to identify … a valuable assessment ~~of~~ **to help in determining** what worked and why."

NRCS 171 Pg. A-2, 1.1 Background, para.3, sent.5 – "Small-scale restoration … and hypoxia (Coalition to restore Coastal Louisiana, **1989**). *[should this be 1998]*

NRCS 172 Pg. A-14, 2.1 AEAM Framework, para.2, sent.2 – "CWPPRA-initiated tool development, such as … (Steyer et al., 2003), …" *[Need to cite in Literature Cited on pg.A-60]*

Pg. A-15, 2.1.1.2 Increase understanding using models, para.1, sent.1 – "Models are useful in … project (Lee and Gosselink, 1988; Mitsch, 1994; Lee, 1993)." *[Need to cite in Literature Cited on pg.A-59]*

Pg. A-15, 2.1.1.2 Increase understanding using models, para.1, sent.2 – "In addition, models … (Shugart, 1989)." *[Need to cite in Literature Cited on pg.A-60]*

Pg. A-15, 2.1.1.2 Increase understanding using models, para.1, sent.3 – "The S&T Program would … by Meyer and Swank (1996)." *[Need to cite in Literature Cited on pg.A-59]*

Pg. A-16, Figure A-2.2. Adaptive Management and Assessment – "This figure presents the S&T Program … LCA Plan (Adapted from Ogden, 1999)." *[Need to cite in Literature Cited on pg.A-60]*

Pg. A-17, 2.1.1.4 Monitoring and evaluation, para.1, sent.1 – "design approaches (Underwood, 1994)." *[Need to cite in Literature Cited on pg.A-60]*

NRCS 166: Citation is referenced in Section 3.

NRCS 167: 1989 is the correct year.

NRCS 168: Concur. Change made in the appendix.

NRCS 169: Text has been revised accordingly, however, the term "adaptive management" has been deleted from the sentence.

NRCS 170: Concur. Change made in the appendix.

NRCS 171: 1989 is the correct year.

NRCS 172: Concur. Change made in the appendix.

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NRCS 173 Pg. A-23, 3.2.2 Science Board (SB), para.1, sent.1 – "National Academy of Science-level … and a representative of appropriate additional Federal agencies **(to include all those in CWPPRA)**."

NRCS 174 Pg. A-23, 3.2.2 Science Board (SB), para.2, sent.1 – "Each member … or engineering), **long working field knowledge in Louisiana marshes,** have experience in science program … restoration."

NRCS 175 Pg. A-27, 3.3.2.2 The LCA approach, para.2, sent.4 – "The first of these modules, wetlands, was designed … Steyer et al., 2003)" *[Need to cite in Literature Cited on pg.A-60]*

NRCS 176 Pg. A-30, 3.3.4.1 Why decision support is important?, para.2, after sent.3 – "Presumably, what we … future decision-making. **This has proven effective in CWPPRA and will be expanded in the larger scale approach.**"

NRCS 177 Pg. A-32, 3.3.5.1 Why peer review is important?, para.1, sent.2 – "Peer review of science and … presented (NRC, 2002)" *[Need to cite in Literature Cited on pg.A-60]*

NRCS 178 Pg. A-33, 3.3.5.1 Why peer review is important?, bullet.3 – "An independent verification of the quality … program level, **especially when involving people with on-the-ground experience**."

NRCS 179 Pg. A-33, 3.3.5.2 Lessons learned on using peer review in ecosystem restoration, para.1, sent.1 – "There have been several … planning (e.g., Kostoff, 1997; NRC, 1998)" *[Need to cite in Literature Cited on pg.A-59 and pg.A-60]*

Pg. A-33, 3.3.5.2 Lessons learned on using peer review in ecosystem restoration, para.1, sent.2 – "Most recently and most directly … Planning' (NRC, 2002) and the draft report …" *[Need to cite in Literature Cited on pg.A-60]*

Pg. A-33, 3.3.5.2 Lessons learned on using peer review in ecosystem restoration, para.3, sent.1 – "Importantly, the NRC noted … be implemented NRC (2002)." *[Need to cite in Literature Cited on pg.A-60]*

Pg. A-35, 4.1 Incorporation of Uncertainty in Plan Formulation, para.1, sent.2 – "The LCA PDT recognizes those … constructed the past ~~10~~ years under CWPPRA **and earlier conservation construction efforts**, the LCA PDT …"

Pg. A-36, 4.2.1.1 Determine relative sea level … within the coastal zone, para.1, sent.2 – "Processes that contribute to … fluid withdrawal, **soil transport,** and regional tectonic movement."

Pg. A-37, 4.2.1.4 Determine sources of … restoration efforts, para.1, sent.2 – "While much is known … and available **to fit the needs of a particular project**."

NRCS 173: The suggested text has not been included in the appendix because the USACE and local sponsor do not want to legislate who will be on the Science Board at this time.

NRCS 174: The suggested text has not been included in the appendix because the language is subjective and would exclude qualified personnel from other parts of the country with expertise that could aid the LCA Plan restoration effort.

NRCS 175: Concur. Change made in the appendix.

NRCS 176: The text has been revised to state that "This has been proven in CWPPRA, Everglades restoration, and other programs." The term "presumably" has also been deleted.

NRCS 177: Concur. Change made in the appendix.

NRCS 178: The suggested text regarding the need for on the ground experience has been included. It has not been included as part of independent verification process because this would limit participation in the verification process, excluding individuals with practical experience.

NRCS 179: Concur. Change made in the appendix.

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NRCS 180 Pg. A-39, 4.2.3.2 Develop process-based models … restoration measures, para.1, sent.2 – "These models served as useful **preliminary** tools for evaluating …"

NRCS 181 Pg. A-41, 4.3.1 Purpose and Need, para.3, sent.3 – "In order to be responsive … time frame **as proven useful in CWPPRA**."

NRCS 182 Pg. A-43, 4.3.9.1 Use of dredged material … techniques, para.1, sent.1 – "There is the potential to distribute … currently open water areas **and maintain function emergent marsh**."

NRCS 183 Pg. A-44, 4.3.9.3 Sources for marsh creation, … cheniers, para.1, sent.2 – "Uncertainties regarding the … scale **as does the reestablishment of woody habitat on cheniers, levees and barrier islands**."

NRCS 184 Pg. A-44, 4.3.9.4 Combining techniques of … diversion, para.1, after sent.6 – "The best combination … determined. **The extent that a platform will maintain its effectiveness compared to allowing for continued settlement needs to be examined.**"

NRCS 185 Pg. A-44, 4.3.9.5 Operational strategies for water diversions, para.1, sent.2 – "Several recent studies … operational strategy **and moving water out of canals and into adjacent marshes**."

NRCS 186 Pg. A-45, 4.3.9.6 Sediment sources for … and land bridges, para.1, sent.2 – "Two sources already identified are … available material, **effect on archaeological sites**, and the cost …"

NRCS 187 Pg. A-45, 4.3.9.7 Remediation of canals for … restoration, para.1, sent.4 – "Several different … 4) gaps … hydrology **where appropriate**; and 5) test plugs …"

NRCS 188 Pg. A-45, 4.3.9.7 Remediation of canals for … restoration, para.1, after sent.5 – "If backfill is used, impacts … be addressed. **Note that elevated banks are important wildlife refugia during storm events and provide valuable habitat for neotropical migrants.**"

NRCS 189 Pg. A-45, 4.3.9.8 Erosion protection structures, para.1, sent.1 – "Erosion along open bays and channels has ~~lead~~ **led** to wetland losses …"

NRCS 190 Pg. A-47, 5.2.2 Sub-Strategy for Effective Use of Resources, bullet.3) – "Professional **working** experience in a community …"

NRCS 191 Pg. A-49, 5.3 Specific Tasks for S&T Plan Implementation, para.1, sent.1 – "Execution of … outside of the state**, as well as field managers with hands-on experience in local marshes**."

NRCS 180: The suggested text has not been included in the text because the notion that the models require additional refinement is captured in the following sentence of the appendix.

NRCS 181: Concur. Change made in the appendix

NRCS 182: Text has been revised to read: "…currently open water areas and maintain function of existing emergent marsh."

NRCS 183: Concur. Change made in the appendix.

NRCS 184: The text has been revised to include the following sentences: "The optimal height of a created platform needs to be determined such that natural colonization of wetland vegetation can occur. Compaction rates related to construction of the platform should not exceed the rate of soil building so that the newly created areas are self-sustaining."

NRCS 185: Concur. Change made in the appendix.

NRCS 186: Suggested text has not been included because archeological sites are not part of the uncertainty discussed in this section, and these sites must be addressed in the standard study process.

NRCS 187: Concur. Change made in the appendix.

NRCS 188: The following text has been included in the appendix and LCA Plan: "Elevated spoil banks may provide important wildlife refugia during storm events and valuable habitat for neotropical migratory birds, and the relative value of this habitat must be evaluated against the system needs for restored hydrology.

NRCS 189: Concur. Change made in the appendix.

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NRCS 190: Suggested language has not been included in the text because the term is redundant. In addition, the suggested language would limit professional experience to be used in the program to that gained from a particular region or a setting, which would be inappropriate.

NRCS 191: The text has been revised to include "…significant input from agency and academic scientists…"

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Pg. A-49, 5.3.2 Establish the Science Coordination Board, para.1, sent.2 – "The Science Coordination … other organizations **and Federal agencies** as appropriate." NRCS 192

NRCS 193 Pg. A-52, 5.3.7.2 Barrier Island and shoreline restoration program, para.1, sent.2 – "Critical processes … sediment dispersal, **limited longevity of sand alone,** and other poorly …"

Pg. A-52, 5.3.7.2 Barrier Island and shoreline restoration program, para.1, sent.4 – "These may evolve into guiding … investigations**, yet still require site-specific determination**." NRCS 194

NRCS 195 Pg. A-53, 5.3.7.2 Barrier Island and shoreline restoration program, para.2, sent.4 – "Cost effectiveness **and longevity** would be key criteria …"

Pg. A-54, 5.4 Making Adaptive Management Work, para.1, sent.3 – "Recognizing that structures would develop and … from the start**, as is done with CWPPRA monitoring** – rather than making … NRCS 196

NRCS 197 Pg. A-55, 5.4.1.3 Report card, para.1, sent.6 – "Finally, the method … definitions and measures **and not reflect philosophical preconceptions**."

Pg. A-55, 5.4.1.3 Report card, para.1, sent.3 – "Performance reporting on the Everglades (McLean and Ogden 2000) and …" *[Need to cite in Literature Cited on pg.A-60]* NRCS 198

NRCS 199 Pg. A-58, 6.0 LITERATURE CITED - "Coalition to Restore Coastal Louisiana (CRCL). **1989**." *[should this be 1998?]*

Pg. A-59, 6.0 LITERATURE CITED - *Add:* **Kostoff, 1997.**

Pg. A-59, 6.0 LITERATURE CITED - *Add:* **Lee, 1993.**

Pg. A-59, 6.0 LITERATURE CITED - *Add:* **Lee and Gosselink, 1988.**

Pg. A-59, 6.0 LITERATURE CITED - *Add:* **McLean and Ogden 2000.**

Pg. A-59, 6.0 LITERATURE CITED - *Add:* **Mendelssohn et al. 1981.**

Pg. A-59, 6.0 LITERATURE CITED - *Add:* **Meyer and Swank. 1996.**

Pg. A-59, 6.0 LITERATURE CITED - *Add:* **Mitsch, 1994.**

Pg. A-60, 6.0 LITERATURE CITED - *Add:* **NRC, 1998.**

Pg. A-60, 6.0 LITERATURE CITED - *Add:* **NRC, 2002.**

Pg. A-60, 6.0 LITERATURE CITED - *Add:* **Ogden, 1999.**

NRCS 200

NRCS 192: Text has been revised to include "and Federal and state agencies as appropriate."

NRCS 193: Suggested language has not been included because it refers to processes affecting shorelines, not the efficacy of project alternatives.

NRCS 194: Concur. Change made in the appendix.

NRCS 195: Suggested language has not been included in the appendix because longevity is already captured in the analysis if the benefits and cost effectiveness are calculated correctly.

NRCS 196: Suggested language has not been included in the text because its inclusion does not add value to the sentence.

NRCS 197: Text has been revised as follows: "… definitions and measures and reflect objective assessments.

NRCS 198: Concur. Change made in the appendix.

NRCS 199: 1989 is the correct year.

NRCS 200: Concur. Change made in the appendix.

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Pg. A-60, 6.0 LITERATURE CITED - *Add:* **Shugart, 1989.**

Pg. A-60, 6.0 LITERATURE CITED - *Add:* **Steyer et al., 2003.**

Pg. A-60, 6.0 LITERATURE CITED - *Add:* **Underwood, 1994.**

APPENDIX B – Historical and Projected Coastal Louisiana Land Changes: 1978-2050 40pp {did not have time to review}

APPENDIX C – Hydrodynamic and Ecological Modeling

Pg. C-6, 1.3 Causal Mechanisms … Louisiana, para.1, sent.2 – "Marshes in coastal regions … and Howes 1994~~e~~), …" *[Why is there a "c" placed after year? – no other publication by these authors in same year]*

Pg. C-6, 1.3 Causal Mechanisms … Louisiana, para.3, sent.1 – "Coastal Louisiana has the highest rate … Barras et al., **2003.** Appendix G)."

Pg. C-7, 1.3 Causal Mechanisms … Louisiana, para.2, after sent.6 – "The Mississippi River levee prevented … coastal areas. **Navigation and other factors keep the river from switching and former a larger delta lobe within the Atchafalaya Bay.**"

Pg. C-9, 1.3 Causal Mechanisms … Louisiana, para.1, after sent.5 – "Studies have shown that thjese … Rogers et al. 1993). **However they have been able to maintain the emergent marsh or with active systems restore degraded emergent marsh (Minority Report 1991).**"

NRCS 200 (Continued)

NRCS 201 Pg. C-12, Figure C.1-8 – *Can't read the middle part of figure*

Pg. C-12, 1.4 Concepts of Restoration Science, para.2, sent.5 – "Destabilization of marsh sediments has been … 1992), **salinity (Chabreck and Hoffpauir 1962)**, and chronic waterlogging stress …" NRCS 202

NRCS 203 Pg. C-14, Figure C.1-9 – *Need to work on layout, confusing and not readable*

Pg. C-20, Table C.2-1 – *Add column:* **Job Title** *[gives an idea of their expertise in the appropriate field – otherwise it might be biologists doing engineering, or visa-versa]* NRCS 204

NRCS 205 Pg. C-21, Table C.2-1 – "Baird B. (spell out first name) *show who he works for*"

NRCS 201: The figure can be read when viewed in color on the electronic version of the final report.

NRCS 202: Concur. Change made in the appendix.

NRCS 203: Although this figure contains many arrows and boxes, it is essential to the chapter.

NRCS 204: Because job title does not necessarily indicate an area of expertise, it has not been included in the table.

NRCS 205: Concur. Change made in the appendix.

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NRCS 205 (Continued)

Pg. C-23, 2.3.1 Existing Models, para.1, sent.1 – "Assimilation, Demonstration System (Harding et al. 1999) and NOAA … [Curt Mason, …" *[Need to cite in Literature Cited on pg.C-273 and C-275, respectively]*

Pg. C-23, 2.3.2 Modeling Tools, para.6, after sent.3 – "The distinction is that products from simulation … as in desktop models. **All models must be ground-truthed using both field data and empirical knowledge of experienced field personnel.**"

NRCS 206

Pg.C-36, Figure C.3-1 ~ *subdivisions are shown divided further than sub-division (sub-sub-division?)*

NRCS 207

Pg.C-44, 3.6 Calibration and Verification, para.1, sent.1 – "The POM was calibrated for Lake … (Georgiou **and McCorquodale** 2002)."

Pg.C-44, 3.6 Calibration and Verification, para.3, sent.4 – "A subroutine … at wetland hydrology (Meselhe and Twilley, unpublished)." *[Need to cite in Literature Cited on pg.C-276]*

Pg.C-52, 3.8 Discussion of Model Limitations, bullet 5, sent.1 – "All ~~model~~ **models** are subject to uncertainty."

Pg.C-52, 3.8 Discussion of Model Limitations, bullet 7, sent.1 – "Georgiou **and McCorquodale** (2002)."

Pg.C-53 ~ *page missing*

Pg.C-54, 4.1.1 Introduction, para.1, sent.4 – "Two variants of the TABS model … in some detail in USACE (2000, 2001) and Moffatt ~~&~~ **and** Nichol (2000), and in …" *[Need to cite in Literature Cited on pg. C-281 and pg.C-276]*

Pg.C-54, 4.1.1 Introduction, para.3, sent.2 – "Output from … location (USACE 2001)" *[Need to cite in Literature Cited on pg. C-281]*

Pg.C-56, 4.1.2 Objectives, para.4, sent.4 – "Much additional … is available in USACE (2000) and Moffatt ~~&~~ **and** Nichol (2000), and in …" *[Need to cite in Literature Cited on pg. C-281 and pg.C-276]*

Pg.C-56, 4.1.2 Objectives, para.5, sent.1 – "A web site, www.tabs.lsu.edu, has been …" *[underline and blue font for website]*

Pg.C-92, 5.2.1 Hydrodynamic Module, para.2, sent.1 – "Visser et al. (2003) developed a spatial …" *[In Literature Cited on pg.C-281 there are two papers that can be listed as Visser et al. 2003, which one is this? Label these "a" and "b" to distinguish them.]*

NRCS 206: Subprovinces are divided into subdivisions. The purpose, as explained in the text, was to permit better generalization of the results. No change was made to the appendix.

NRCS 207: Concur. Change made in the appendix.

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NRCS 207 (Continued)

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Pg.C-93, 5.3.2 Near-Field Deltaic Land Building, para.2, sent.4 – "Using this definition … by Visser et al. (2003)." *[Two papers in Literature Cited on pg.C-281, which one is this?]*

Pg.C-94, 5.3.3 Far-Field Effects on Marsh Nourishment, para.1, sent.4 – "The deltas zone was assumed … that Visser et al. (2003) discuss ..." *[Two papers in Literature Cited on pg.C-281, which one is this?]*

Pg.C-98, 5.5 Discussion, para.1, sent.1 – "If Atchafalaya River influence … by Visser et al. (2003), then most ..." *[Two papers in Literature Cited on pg.C-281, which one is this?]*

Pg.C-98, 5.5 Discussion, para.5, sent.1 – "With respect to near-field … than assumed in Visser et al. (2003), but this depends..." *[Two papers in Literature Cited on pg.C-281, which one is this?]*

Pg.C-98, 5.5 Discussion, para.5, sent.2 – "Both the ABM and Fitzgerald (**1999**) produced similar …" *[In Literature Cited on pg.C-272 this is listed as 1998, which is correct?]*

Pg.C-98, 5.5 Discussion, para.6, sent.1 – "The ABM prediction … developed by Visser et al. (2003), though it projected ..." *[Two papers in Literature Cited on pg.C-281, which one is this?]*

Pg.C-99, Figure C.6-1 ~ *geologically chenier extends beyond basin boundaryall the way to Southwest Pass*

Pg.C-102, 6.1.3 Model Setup, para.1, sent.1 – "A three-dimensional … validated (Meselhe and Noshi 2001), as described below." *[In Literature Cited on pg.C-276 there are two papers that can be listed as Meselhe and Noshi 2001, which one is this? Label these "a" and "b" to distinguish them.]*

Pg.C-104, 6.1.5.1 Calibration and Validation Results, para.1, sent.2 – "A complete discussion … report by Meselhe and Noshi (2001)." *[Two papers in Literature Cited on pg.C-276, which one is this?]*

Pg.C-117 ~*delete page break after paragraph 1*

Pg.C-118, 6.2.8 Model Setup, para.5, bullet – "Over 140 miles of ~~waterways56 channels 2,132 computational points12 structures~~ **waterways, 56 channels, 2,132 computational points, 12 structures** (weirs, …" *[is this what is meant?]*

Pg.C-119, 6.2.8 Model Setup, para.1, sent.1 – "existing structures, as well … of the project area." ~ *[were these adjusted according to the following of a typical operational scheme on those actively managed structures]*

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NRCS 207 (Continued)

Pg.C-119, 6.2.9 Model Calibration, para.6, sent.2 – "Detailed results can be found in Meselhe et al. (**2001**)." *[In Literature Cited on pg.C-276 this is listed as 2000, which is correct?]*

Pg.C-124, 6.2.14 Final Project Design Configurations, bullet 8. - "8. & 9. Install two structures …. 10 or 11 and 12. (X = …. 416,903) (X = 2,882,968 , Y = 415,481)" *[add comma and close spacing]*

Pg.C-124, 6.2.14 Final Project Design Configurations, bullet 10., sent.3 - "Terraces will be vegetated … (use Grand-White Lakes Land Bridge project vegetation specifications **for preliminary design**)."

Pg.C-132, Figure C.7-1 – "~~S,~~ **Salinity,** Vi" *~spell out Salinity rather than using S*

Pg.C-138, 8.2.1 Elevation Component, para.1, sent.2 – "Long-term … peats and Gagliano (**1999**) present …" *[In Literature Cited on pg.C-272 this is listed as 1998, which is correct?]*

Pg.C-138, 8.2.1 Elevation Component, para.1, sent.7 – "Recent rates … tide gauge mesurements (Penland and Ramsey **1991**) indicate …" *[In Literature Cited on pg.C-277 this is listed as 1990, which is correct?]*

Pg.C-138, 8.2.1 Elevation Component, para.1, sent.7 – "Recent rates … not yet clear, Morton et ~~al~~ **al.** (2002) has identified …"

Pg.C-142, 8.2.4 Nourishment Component, para.1, sent.3 – "Since the Atchafalaya is one of the largest … at Caernarvon (USGS unpublished data) a diversion …" *[Need to cite in Literature Cited on pg. C-281]*

Pg.C-143, 8.3.1 Land Building, para.2, sent.2 – "However, prior to the mid … Basin (Cratsley 1975)." *[Need to cite in Literature Cited on pg. C-270]*

Pg.C-143, 8.3.1 Land Building, para.1, sent.5 – "However, there were only … in the delta in 1990 (R. Cunningham personal communication) in addition …." *[Need to cite in Literature Cited on pg. C-270]*

Pg.C-166, 10.1 Introduction, para.2, sent.4 – "The out from the …" *~ needs explaining (output?)*

NRCS 208

Pg.C-167, 10.1 Introduction, para.2, after sent.3 – "The Instream Incremental Flow … fish habitat (Bovee *et al.* 1998). **Executive Order 13186 of January 10, 2001 mandates that all Federal agencies include protection of migratory bird habitat in all planning efforts.** *~ no neotropical species were included even thought there are HSI models available for some species.*

NRCS 208: This chapter describes parameters that were used to construct the Habitat Use Module. It is not intended to describe all HIS models available. Therefore, because neotropical species were not included in module formulation, the above suggested discussion is not warranted. In future efforts, there will be a need for more terrestrial species, including migratory birds, to be included.

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NRCS 209

Pg.C-168, 10.2 Limitations of the Module, para.2, after sent.4 – "Buck (1956a; a956b) reported … indicate low productivity. **Gilmore (1986) showed the highest faunal diversity in perimeter ditches, while Veery and Yellow Warbler (Sousa 1982, Schroeder 1982) both depend on available shrubs. Bettinger and Hamilton (1985) showed avian usage in south Louisiana marshes using transect data.**

Pg.C-177, 10.3.6 Brown Shrimp, para.1, sent.1 – "The following … Brody 1983)." *[In Literature Cited on pg.C-280 this is listed as 1982, which is correct?]*

Pg.C-180, 10.4.1 General Methods, para.3, sent.1 – "**All wildlife** ~~Allwildlife~~ HSI models were …"

Pg.C-181, 10.4.1 V3 – average water depth … in the cell, para.4, sent.6 – "The assumed relationship … during the late 1990s (J.A. Nyman, unpublished data), and because …" *[Need to cite in Literature Cited on pg. C-277]*

Pg.C-180, 10.4.2 American Alligator, para.1, sent.1 – "Habitat … by McNease and Joanen (1978), the …" *[Need to cite in Literature Cited on pg. C-276]*

Pg.C-183, 10.4.3 Dabbling Ducks, para.1, sent.4 – "This model assumes … to that in brackish marsh (personal communication, Barry Wilson, …" *[Need to cite in Literature Cited on pg. C-282]*

Pg.C-183, 10.4.3 Dabbling Ducks, para.2, sent.2 – "Unlike other wetland wildlife … from ponds (Nyman et al. 1993) and the …" *[Two papers in Literature Cited on pg.C-277, which one is this?]*

Pg.C-184, 10.4.4 Mink, para.1, sent.1 – "Habitat … reported by Linscombe and Kinler (1985) who …" *[Need to cite in Literature Cited on pg. C-275]*

Pg.C-184, 10.4.5 Muskrat, para.1, sent.1 – "Habitat … reported by Linscombe and Kinler (1985) who …" *[Need to cite in Literature Cited on pg. C-275]*

Pg.C-185, 10.4.6 Otter, para.1, sent.1 – "Habitat … reported by Linscombe and Kinler (1985) who …" *[Need to cite in Literature Cited on pg. C-275]*

NRCS 210

Pg.C-185 ~ *Add:* **10.4.7 Neotropical Migrants** ~ *section necessary to follow mandate of EO#13186; use Veery and Yellow Warbler HSI models for habitat on barrier islands, cheniers, natural levees, spoil banks, and other suitable areas that are extremely important to spring and fall migration. These two species can be utilized to represent the myriad of individuals that rely on coastal habitat for their survival. CWPPRA has found it necessary to add a model specifically for neotropical migrants and has included wooded habitat in both barrier island and barrier headland models.*

NRCS 209: Concur. Change made in the appendix.

NRCS 210: See response NRCS 208.

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NRCS 211

Pg. C-268, LITERATURE CITED – "Barras et al. 2003. Historic and … USGS Open File Report 03-**xx**, 27pp" *[Report number?]*

Pg. C-268, LITERATURE CITED – "Bazzaz, F.A. 1997. Allocation … questions ~~In:~~ **In:** F.A. Bazzaz and …" *[Need consistency through report]*

Pg. C-268, LITERATURE CITED – *Add:* **Bettinger, Kim M. and Robert B. Hamilton. 1985. Avian USE OF LEVEE Habitat TypeS, Rockefeller Wildlife Refuge, Louisiana, Fourth Coastal Marsh and Estuary Management Symposium, Baton Rouge, pp. 165-186**

Pg. C-268, LITERATURE CITED – "Boumans and Day 1990 ??????" *[Name of paper needed]*

Pg. C-268, LITERATURE CITED – "Brinson, M.M. ~~(1993)~~ **1993**. A hydrogeomorphic classification …"

Pg. C-268, LITERATURE CITED – "Brinson, M.M. and Rhenhardt, R. ~~(1996)~~ **1996**. The role of reference wetlands … Ecological Applications ~~**6**~~ **6**, 69-76." *[Volume number not bold – consistency]*

Pg. C-269, LITERATURE CITED – *Add:* **Chabreck, Robert H. and Clark M. Hoffpauir. 1962. The Use of Weirs in Coastal Marsh Management in Louisiana. Proc. Southeast. Assoc. Game and Fish Comm., 16:103-112.**

Pg. C-270, LITERATURE CITED – "Constanza et al. 1988. A Dynamic Spatial Simulation Model … p. 99-114 ~~In:~~ **In:** W.J. Mitsch …" *[Need consistency through report]*

Pg. C-270, LITERATURE CITED – *Add:* **Cratsley 1975**

Pg. C-270, LITERATURE CITED – *Add:* **Cunningham, personal communication**

Pg. C-270, LITERATURE CITED – "Day et al. 1995. The Influence of … p. 151-160 ~~In:~~ **In:** K.R. Dyer …" *[Need consistency through report]*

Pg. C-270, LITERATURE CITED – "Day, R.H., R.K. Holz and J.W. Day, Jr.. ~~(1990)~~ **1990**. "An inventory … Environmental Management ~~**14**~~ **14** (2), 229-240." *[Volume number not bold – consistency]*

Pg. C-271, LITERATURE CITED – "Day, J.W., Jr. et al. 1994. Physical processes … deterioration ~~In:~~ **In:** H.H. Roberts …" *[Need consistency through report]*

Pg. C-271, LITERATURE CITED – "Day, J.W., Jr. et al. ~~(1997)~~ **1997**. "System functioning … Management ~~**25**~~ **25** :115-153." *[Volume number not bold – consistency]*

Pg. C-271, LITERATURE CITED – "Duke , James H. Jr. ~~(1985)~~ **1985**.

Pg. C-271, LITERATURE CITED – "Ewel, J.J.. 1987. Restoration is … theory ~~In:~~ **In:** Restoration ecology …" *[Need consistency through report]*

NRCS 211: Concur. Change made in the appendix.

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Pg. C-272, LITERATURE CITED – "Fisk, H.N. et al. ~~(1954)~~ **1954**. "Sedimentary framework … Petrology ~~24~~ **24** (**2**):76-99." *[Volume number not bold – consistency]*

Pg. C-272, LITERATURE CITED – "Flynn, K.M. et al. 1990. Vegetation and soil response … management ~~In:~~ **In:** D.R. Cahoon and …" *[Need consistency through report]*

Pg. C-272, LITERATURE CITED – "Gael, B.T and … 1979. Drainage … pp. 147-163 ~~In:~~ **In:** J. W. Day, Jr. …" *[Need consistency through report]*

Pg. C-272, LITERATURE CITED – "Gagliano, S. and … 1975. An approach … pp. 223-238 ~~In:~~ **In:** M.S. Broussard. …" *[Need consistency through report]*

Pg.C-272, LITERATURE CITED – "Georgiou, I.Y. **and** McCorquodale, J.A. …~~(2002)~~ **2002**. "Stratification …"

Pg.C-272, LITERATURE CITED – "Georgiou, I.Y. **and** McCorquodale, J.A. …~~(2000)~~ **2000**. "Salinity … a Shallow Lake ~~In:~~ **In:** Stratified. …" *[Need consistency through report]*

Pg. C-272, LITERATURE CITED – *Add:* **Gilmore, R. Grant. 1986. Fish, Macrocrustacean and Avian Population Dynamics and Cohabitation in Tidally Influenced Impounded Subtropical Wetlands p373-394, In: Proc. Symp. Waterfowl and Wetlands Management in Coastal Zone of Atlantic Flyway, Wilmington, DE.**

Pg. C-273, LITERATURE CITED – "Gosselink … 1995. Causes … pp. 203-236 ~~In:~~ **In:** D.J. Reed. …" *[Need consistency through report]*

Pg. C-273, LITERATURE CITED – "Gosselink … 1998. Coastal Louisiana ~~In:~~ **In:** Mac, M.J. , P.A. …" *[Need consistency through report]*

Pg. C-273, LITERATURE CITED – "Gosselink … ~~(1984)~~ **1984**. The ecology …

Pg. C-273, LITERATURE CITED – "Gosselink, J.G. and R.E Turner. ~~(1978)~~ **1978**. The role …

Pg. C-273, LITERATURE CITED – "Gould … ~~(1959)~~ **1959**. "Geologic …

Pg. C-273, LITERATURE CITED – "Haralampides, K. ~~(2000)~~ **2000**. "A study …

Pg. C-273, LITERATURE CITED – "Haralampides, K., et al … ~~(2000)~~ **2000**. Water quality …

Pg. C-273, LITERATURE CITED – "Haralampides, K., et al … ~~(2000)~~ **2000**. "Modeling of …

Pg. C-273, LITERATURE CITED – *Add:* **Harding et al. 1999.**

Pg. C-274, LITERATURE CITED – "Jin, K.R. ~~(2000)~~ **2000**. Application …"

Letter 54: Natural Resources Conservation Service (NRCS)

LCA Ecosystem Restoration Study – Draft – July 2004
NRCS Comments pg38

NRCS 211 (Continued)

Pg. C-275, LITERATURE CITED – *Add:* **Mason, Curt. 200?.**

Pg. C-275, LITERATURE CITED – "McAnally …. ~~(1996)~~ **1996**. "Bonnet …"

Pg. C-275, LITERATURE CITED – "McCorquodale … ~~(2001)~~ **2001**. "Freshwater Inflows … *Basin*." ~~In:~~ **In:** S. Penland. …" *[Need consistency through report]*

Pg. C-275, LITERATURE CITED – *Add:* **McNease and Joanen 1978**

Pg. C-276, LITERATURE CITED – "Mellor, G.L. ~~(1998)~~ **1998**. "A Three- …"

Pg. C-276, LITERATURE CITED – "Mellor, G.L. and Yamada, T. ~~(1982)~~ **1982**. "Development …"

Pg. C-276, LITERATURE CITED – "Meselhe, E.A. et al. ~~(2001)~~ **2001**. "Hydrologic …"

Pg. C-276, LITERATURE CITED – "Meselhe, E.A. ~~(2001)~~ **2001**. "Trajectory …"

Pg. C-276, LITERATURE CITED – "Meselhe, E.A. et al. ~~(2001)~~ **2001**. "Hydrodynamic and …"

Pg.C-276, LITERATURE CITED – *Add:* **Meselhe and Twilley, unpublished**

Pg. C-276, LITERATURE CITED – *Add:* **"Minority Report". 1991. A Study of Marsh Management Practice in Coastal Louisiana (DRAFT). LDNR, LDWF, SCS, Verm. Corp, Fina LaTerre and USFWS.**

Pg.C-276, LITERATURE CITED – *Add:* **Moffatt and Nichols, 2000**

Pg. C-277, LITERATURE CITED – "Nichols 1959 ??????" *[Name of paper needed]*

Pg. C-277, LITERATURE CITED – *Add:* **Nyman, J.A. unpublished data**

Pg. C-277, LITERATURE CITED – "Oey …. ~~(1985a)~~ **1985a**. "A three- …"

Pg. C-277, LITERATURE CITED – "Oey …. ~~(1985b)~~ **1985b**. "A three- …"

Pg. C-277, LITERATURE CITED – "Turner and Gosselink 1975

Pg. C-277, LITERATURE CITED – "Penland et al 1996 ??????" *[Name of paper needed]*

Pg. C-278, LITERATURE CITED – "Rabalais et al **????** Beyond science …" *[Year of paper needed]*

Pg. C-278, LITERATURE CITED – "Reyes … 1998. Landscape Modeling … ~~In:~~ **In:** L.P. Rozas, …" *[Need consistency through report]*

Pg.C-279, LITERATURE CITED – "Rybczyk, J.M. ~~,~~and D.R. Cahoon. …"

Letter 54: Natural Resources Conservation Service (NRCS)

NRCS 211 (Continued)

LCA Ecosystem Restoration Study – Draft – July 2004
NRCS Comments pg39

Pg.C-279, LITERATURE CITED – *Add:* **Schroeder, R.L. Habitat suitability index models: Yellow Warbler, U.S. Dept. Int. Fish Wildl. Serv. FWS/OBS-82/10.27, 22pp.**

Pg. C-279, LITERATURE CITED – "Schroeder …. ~~(1993)~~ **1993**. "Guidelines …"

Pg. C-279, LITERATURE CITED – "Signall …. ~~(1997)~~ **1997**. "Modeling …"

Pg. C-279, LITERATURE CITED – "Smolarkiewicz …. ~~(1986)~~ **1986**. "The …"

Pg. C-280, LITERATURE CITED – "Smolarkiewicz …. ~~(1984)~~ **1984**. "A fully …"

Pg.C-280, LITERATURE CITED – *Add:* **Sousa, P.J. Habitat suitability index models: Veery, U.S. Dept. Int. Fish Wildl. Serv. FWS/OBS-82/10.22, 17pp.**

Pg. C-280, LITERATURE CITED – "Stronach …. ~~(1993)~~ **1993**. "A fully …"

Pg. C-280, LITERATURE CITED – "Thomann …. ~~(1987)~~ **1987**. *Principles* …"

Pg. C-277, LITERATURE CITED – "Turner and Gosselink 1975 ?????" *[Name of paper needed]*

Pg. C-280, LITERATURE CITED – "Stuber … Fish ~~Willd.~~ **Wildl**. Serv. …"

Pg. C-281, LITERATURE CITED – "Twilley … ~~**1998**~~ **1998** An approach … *[Year not in bold]*

Pg.C-281, LITERATURE CITED – *Add:* **USACE, 2000**

Pg.C-281, LITERATURE CITED – *Add:* **USACE, 2001**

Pg. C-281, LITERATURE CITED – "**Users Guide to RMA2 ????** …" *[Is this the correct author? Year of paper needed]*

Pg.C-281, LITERATURE CITED – *Add:* **USGS unpublished data**

Pg. C-281, LITERATURE CITED – "Visser … 2003. Louisiana coastal … module. ~~In:~~ **In:** R. Twilley, …" *[Need consistency through report]*

Pg. C-281, LITERATURE CITED – "Waide …. ~~(1976)~~ **1976**. "Engineering …"

Pg. C-282, LITERATURE CITED – "Weller … 1978. Management … 267-284. ~~In:~~ **In:** R.E. Good, …" *[Need consistency through report]*

Pg. C-282, LITERATURE CITED – "White … ~~1994c~~ **1994**. Translocation ... *[Why have "c" after date?]*

Pg. C-282, LITERATURE CITED – *Add:* **Wilson, B. pers. comm.**

Pg. C-282, LITERATURE CITED – "Woodroffe …. ~~(1992)~~ **1992**. Mangrove … geomorphology. ~~In:~~ **In:** *Tropical* …" *[Need consistency through report]*

Letter 54: Natural Resources Conservation Service (NRCS)

NRCS 211 (Continued)

LCA Ecosystem Restoration Study – Draft – July 2004
NRCS Comments pg40

Pg. C-282, LITERATURE CITED – "Zimmerman … 1984. Densities of ~~Penaeus aztecus, P. setiferus,~~ ***Penaeus aztecus, P. setiferus***, and …" *{Italicize scientific names}*

APPENDIX D – Louisiana Gulf Shoreline Restoration Report
343pp {did not have time to review}

APPENDIX E – Plan Formulation
189pp {did not have time to review}

ATTACHMENT EA-1 - Alternatives
105pp {did not have time to review}

Letter 55: Mr. Tommy Raymond, North Shore Beach Association (NSBA)

North Shore Beach Association

"It's the good life"

President Tommy Raymond 1st Vice President Terry Manning
2nd Vice President Nick Leggio Secretary Trudy Godwin
Treasurer Buddy Mayfield

NSBA P.O. Box 1187 Slidell, LA 70459
www.outlandtech.com/nsb.htm

August 19, 2004

RE: Official comments to the U.S. Army Corps of Engineers - Draft LCA study

Dear Sir:

North Shore Beach (NSB) is a 300 home residential community located along the north shore of Lake Pontchartrain just south of Slidell, La. NSB residents are diverse including doctors, lawyers, engineers, commercial crab fisherman, retired couples, but all share one thing in common. Our love of water related activities. NSB has direct access to marshes and Lake Pontchartrain.

We appreciate the opportunity to comment on the draft LCA study as has been recently released by the US Army corps of Engineers.

NSBA 01

According to the LCA we are within Subprovince 1 and within Subprovince 1 small diversions are proposed around Lake Maurepas, and these are probably good projects. More significant to NSB residents is a proposal on the Mississippi River Gulf Outlet (MRGO).

Nearly all homes are elevated providing a margin of flood protection. However even flood waters, which may not flood living area can cause significant damage to our homes. Foundations and bulkheads are damaged by high water and waves. Yard equipment, cars etc can be flooded. Storm debris can be massive. In 2002 And 2003 our neighborhood suffered through three high water events from Tropical Storm Isidore, Hurricane Lilly and Tropical Storm Bill. One elevated home in 2002 was completely lost by fire started by flooded electrical wiring. By all accounts these were very modest storm events but they were some of the worst flooding and damage ever seen in NSB.

Many residents fish recreationally and are familiar with the size of the MRGO and the impact is has had. No one can rationally conclude that the MRGO has not contributed to flood waters entering into Lake Pontchartrain and contributed to damages we have suffered and will continue to suffer. It is relevant to mention that our community was established in 1954, which is a full ten years before the completion of the MRGO. Our community is water-based and we only see a situation of deteriorating wetlands and higher floodwaters of which MRGO has contributed and will continue to contribute to the loss of marshes.

The MRGO has been often described as the worst environmental impact to this part of the coast. It is beyond comprehension that the U.S. Army Corps of Engineers would persist in any major investment in the MRGO especially as part of a restoration plan. The $100 million project to line the MRGO with

NSBA 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

Letter 55: Mr. Tommy Raymond, North Shore Beach Association (NSBA)

NSBA 01 (Continued)

rock is, at best, channel maintenance; at worst, it is a candidate for "Fleecing of America" project by pouring tax-dollars into a channel while the same channel is being studied for closure. In reality, the $100 million dollar investment could only lead to a politically driven financial argument to keep the MRGO open.

We believe the MRGO needs to be closed ASAP and any rock placement should be done where necessary but paid for by navigation funds. The current project will do nothing to reduce flooding and will likely perpetuate the MRGO leading to further wetland loss and more severe flooding.

We believe the future of our community is at stake and implore the U.S. Army Corps of Engineers to use the power of their talent and resources to find a better solution than the current LCA proposal of a rock project, which we now are on record as opposing.

Sincerely,

T. Raymond

Tommy Raymond
President - North Shore Beach Association
985 641-1621

Letter 56: Mr. A.J. Planche, Jr. (AJP)

Attn: William P Klein, jr. or Timothy Axtman
U.S.Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, La. 70160

July, 23 2004 page 1of 1

Re: E.I.S La. Coastal Areas
Study draft Vol. 1& 2
Dated July 2004

To whom it May Concern: I would like to reserve the right to add to my comment, after all meeting scheduled for the study (Re: above) have been completed. I would like all of my comments to become part of the final E.I.S for this study.

AJP 01 1..I hope that this study is available to everyone in the United States for comments , since the federal government will pay the greater portion of the cost for this project. It should be in at least each major city library.

AJP 02 2..This program is supposed to be about saving Coastal Louisiana, and not about development homes and commercial property in these study areas.

AJP 03 3..Since there isn't any wetlands left in East Jefferson, the most importance area of Jefferson parish is the west bank . Can the COE, tell us what they have done in the past to protect these wetlands in this area ? (excluding Davis Pond , and Myrtle Grove Diversion project)?

AJP 04 4..Hard wood forest, and cypress, tupelo gum swamp are vital to the survival of these coastal wetlands , and therefore should be included in these $$$ billions dollars plus projects.
Will the corps of engineers , and the states have a stricter enforcement in these areas?
(Using 404, and Presidential Orders)

AJP 05 5.. The draft volume 1: LCA main report July 2004,if read by someone from out of state ,they would think that the state of Louisiana and the U.S.C.O.E were doing a great job protection these coastal wetlands, while most of the project by the COE and the STATE were destroying these wetlands .
Like straighten and deepen bayou Barataria from the Intercoastal waterway to the Gulf of Mexico, the Mississippi river Gulf Outlet, which is a straight shot to the Gulf of Mexico. These two projects alone have a great effect on these wetlands ,which we are trying to save ,as they allow saltwater intrusion, into the areas and a greater exchange of tidal flow, which has cause tremendous erosion..
What about levee building projects which always seen to destroy large amounts of upland forest and marsh areas, housing projects that are built in the marsh. (like Woodmere in the Harvey area)

AJP 06 6..What about all of those project done under the river and harbor act, that are mention in the LCA study, volume 1 &2 which involved levee building. (River & Harbor Act)
How much of this land were wetlands when those levees were built ?

AJP 07 7.. How much of this Billions$$ will be used for infrastructure and not coastal protection ?
Will any of these projects that are suppose to create wetlands, by pumping sand to those areas become at a later date a non-wetland areas.?

Thanks
A.J.Planche,Jr
5400 Canal rd, Marrero, La. 70072

AJP 01: Availability of the DPEIS and Main Report for review and comment was posted in the Federal Register on July 9, 2004. The draft report is also available on the internet at http://www.lca.gov/index.htm to increase availability to the public. Additionally, the draft report was sent to 65 public university and parish libraries and museums.

AJP 02: The purpose of the LCA Plan is to identify the most critical human and natural ecological needs of the coastal area; identify near-term restoration features to address these critical needs; establish restoration priorities; describe a restoration implementation process; identify key scientific uncertainties and engineering challenges; and identify, assess, and if appropriate, recommend large-scale restoration feasibility studies.

AJP 03: The USACE has protected the wetlands of east Jefferson Parish through its authority to protect areas termed "waters of the U.S." Many water bodies and wetlands in the nation are waters of the U.S. and are subject to USACE Section 404 regulatory authority. Under Section 404, a USACE permit is required for the discharge of dredged or fill material into waters of the U.S. In addition to regulatory protection of waters of the U.S. by the USACE, several restoration projects located on the west bank of the Mississippi River in Jefferson Parish have been completed, authorized, or are proposed by the CWPPRA to protect and restore wetlands (e.g., BA-04, BA-34, BA-03, BA-39, and others). Furthermore, USACE will be placing Bayou Segnette Waterway dredged material into Jean Lafitte National Park and Preserve's Lake Salvador Shoreline Protection project for wetlands restoration purposes when it is next dredged.

Letter 56: Mr. A.J. Planche, Jr. (AJP)

AJP 04: Regarding the protection of hardwood forest and tupelo gum swamp, USACE recognizes the needs for restoration of swamps in coastal Louisiana, as evidenced by inclusion of the Hope Canal Diversion as part of the LCA Plan. The acquisition of real estate and easements for project implementation will establish some requirements of consistent land use under the LCA Plan. However, short of purchasing all of the land in the coastal zone, the current regulatory guidelines will continue to apply and be enforced. Regarding enforcement of regulations and permits in coastal wetlands, the USACE Regulatory program will continue to enforce the statutes of the Clean Water Act as mandated. In addition, as described on page 6-9 of the LCA FPEIS, the LCA Plan will implement environmentally appropriate development approaches to minimize effects on coastal wetlands. Section 6.2 "Consistency of the LCA Plan with Other Efforts" beginning on page 6-6 of the FPEIS, describes proposed efforts for ensuring consistency between development, coastal protection, and restoration including consistency with CWPPRA, regulatory programs, hurricane protection, and navigation. The USACE will administer the enforcement component of its regulatory program commensurate with its resources and the importance of the wetlands impacted.

Letter 56: Mr. A.J. Planche, Jr. (AJP)

AJP 05: Previous Federal and local efforts based on economic development of the region and the nation, such as the construction of the MRGO, have had unintended adverse environmental effects on the surrounding areas. The proposed LCA Plan will provide restoration opportunities for critical areas of environmental degradation. Additionally, as described in Section 6 of the FPEIS, efforts for ensuring consistency between development, coastal protection, and restoration, including consistency with CWPPRA, regulatory programs, hurricane protection, and navigation, will be employed. This will be applied to ensure that the restoration objectives of a diverse and sustainable ecosystem, both environmentally and economically, are met.

AJP 06: The continued economic development of coastal Louisiana has long been a clear interest of both the Federal and local governments. All levels of government have implemented a great many projects with that objective in mind. Unintended consequences of these valid actions are now being addressed and some of these previously constructed projects may be modified as a result. Section 1 of the FPEIS and Section 1 of the Main Report describe prior studies, reports and existing water resources projects in the study area prepared by the USACE, other Federal, state, and local agencies, research institutes, and individuals. The River and Harbor Act of 1956 (PL 84-455) authorized construction of the Mississippi River Gulf Outlet (MRGO) to provide deep draft navigation access to the New Orleans tidewater port area. An accounting of the number of wetlands impacted by this project was not required at that time. The USACE is currently investigating the feasibility of modifying the MRGO Navigational Project that includes environmental and flood control benefits of channel modifications. Estimates from this study indicate that approximately 2,545 acres of marsh were directly lost due to construction of the MRGO; approximately 14,360 acres of marsh were directly lost due to disposal of dredged material.

Letter 56: Mr. A.J. Planche, Jr. (AJP)

AJP 07: See Main Report section 6 cost tables for LCA Program cost estimates. All proposed restoration features target critical ecological needs; however, it is anticipated that some roads and other infrastructure will need to be modified in support of the proposed restoration efforts. Regarding the future classification of areas slated to receive sand fill, some areas, such as restored barrier beach dunes would not be considered jurisdictional wetlands.

Letter 57: Mr. Benny Rouselle, Plaquemines Parish Government (PPG)

Plaquemines Parish Government

BENNY ROUSSELLE
Parish President

106 Avenue "G"
Belle Chasse, LA 70037

(504) 394-4080
(504) 392-6690
1-888-784-5387
Fax (504) 394-9541

August 20, 2004

Attn: Mr. Tim Axtman
U.S. Army Corps of Engineers
Planning, Programs and Project Management Division
Coastal Restoration Branch – CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on the Louisiana Coastal Area (LCA) Draft Study Report – Tentatively Selected Plan (TSP)

Dear Mr. Axtman,

PPG 01

On behalf of the residents and government of Plaquemines Parish, please accept the following comments as proof of our support for the initial project selection of the LCA program. I have been following the development of the LCA near-term proposal with great interest, not only because of its inclusion of projects within Plaquemines Parish, but also because there are some issues that are not appearing to be addressed despite public comments urging their incorporation. I will expand my thoughts on these issues later in this letter. Ultimately, while I agree that the five initially selected projects are of critical importance in addressing coastal land loss, I do have some concerns about how the plan appears to be undershooting the necessary financial and temporal requirements as well as the types of projects that are being considered.

PPG 02

I would like to start by expressing my satisfaction at the inclusion of Shell Island as a restoration priority. As you may be aware, Plaquemines Parish Government nominated this project through the CWPPRA process and I have been speaking on its behalf for a number of years. Due to costs, engineering uncertainties and the rapid loss of the shoreline, the project never materialized. It has, however, remained an absolute priority for restoration due to its importance as a barrier to the Gulf and its interconnectivity in the larger barrier shoreline. I am hopeful its restoration can begin promptly.

PPG 01: Comment noted.

PPG 02: Comment noted.

Letter 57: Mr. Benny Rouselle, Plaquemines Parish Government (PPG)

PPG 03

There are several concerns I have that have been echoed in the media and by public and private citizens concerned with our land loss rates. The initial LCA proposal was designed to focus on restoration activities implemented over a longer term and higher cost. Due to the reluctance of embracing such a large degree of commitment, the LCA plan was scaled down by one third the timeframe and at best, one-seventh the originally proposed cost estimate. These figures will not allow for an even mediocre attempt at preserving what is left of Plaquemines Parish and the rest of coastal Louisiana. I fear that by dedicating the time and resources we have to achieve such a drastic undershoot of the original plan, we are effectively binding ourselves to receiving an amount that we know is inadequate, yet will be praised by lawmakers as a thorough commitment to restorative actions. We cannot allow the current TSP to be the only attempt at a large scale plan to preserve and protect the coast. I am greatly interested in hearing more about what the Corps plan is to keep funding the fight against coastal land loss.

PPG 04

Moreover, the proposal to authorize approximately two-thirds of the total financial request of the TSP as a conventional means, rather than programmatically, seems to convey a message that anything beyond the initial authorization would be considered a bonus, not part of the necessary larger framework. This sentiment is difficult to justify especially when we are trying to win the hearts and dollars of the nation's taxpayers.

PPG 05

The current TSP does not entertain the idea of sediment delivery in any direct and comprehensive manner. I sense a reluctance in the coastal restoration community to embrace the idea of moving large amounts of sediments to effectively target and rebuild large scale areas of subsidence even though there is a proven track record of utilizing the available technology for such purposes. Recent proposals for sediment delivery have been denied approval through the CWPPRA process yet private developments are making use of and are dependent upon the deposition of river-borne sediments for community developments. Further, by dedicating the money necessary to rebuild our barrier shoreline yet neglecting the vastly eroded marshes behind them, I fear we are sacrificing an opportunity to make great strides in reinforcing the skeletal framework of the islands. The Mississippi River and its sediments are our greatest ally in substantive restoration work and putting this opportunity on the backburner for future revenues neglects the immediacy of its need. A demonstration project of this type and possible dedicated dredging through a diversion are not enough. I am strongly in favor of a project whose sole aim is the creation of new lands through the delivery of dredged materials from the River where it's needed most, behind the barrier shoreline.

PPG 06

In closing, I would like to state that the TSP appears to be a thorough manifestation of comments and priorities suggested by participants in the ongoing LCA study even though the TSP cannot address all or our needs. Shell Island, the addressing of issues related to the Mississippi River Gulf Outlet (MRGO) and the Hope Canal are all projects that have had significant public support through CWPPRA and other venues. I would like to reiterate my support not only for the Shell Island project, but also for the development of projects and technologies that utilize the transport of dredged materials.

PPG 03: Please see General Response #5 regarding the ten-year planning horizon and General Response #10 regarding proposed LCA Plan funding.

PPG 04: The Conditional Authorization of the 5 near-term critical restoration features and the congressional authorization of the remaining LCA Plan features allows for increased execution capability within the first five years of LCA Plan implementation. Following the first five years of implementation, the PDT found that annual budget limitations rather than WRDA authorization of projects would limit the LCA Plan's annual execution. Additionally, the necessary level of detail was not available to develop feasibility level documentation for all 15 restoration features. For more information on project authorization analysis, please refer to Section 4 of the Main Report.

PPG 05: Please see General Response # 9 regarding sediment transport via pipeline. In the near-term the Barataria Barrier-shoreline restoration features proposed in the LCA Plan also involve wetland building in the form of creation of back barrier inter-tidal marsh.

PPG 06: Comment noted.

Letter 57: Mr. Benny Rouselle, Plaquemines Parish Government (PPG)

PPG 07

While diversions are helpful at establishing salinity gradients, direct placement of the sands, silts and clays that compose the marsh is surely the most effective means of creating new land, which is what coastal restoration is all about. Also, the necessary determination to continue pressing for funding and resources is paramount to the long-term success of the LCA program. It must be made clear locally and nationwide that this is merely the first hurdle to jump in establishing a long-term solution addressing the loss of our coastline.

Sincerely,

PLAQUEMINES PARISH GOVERNMENT

Benny Rousselle
Plaquemines Parish President

BR/adm

PPG 07: The LCA Plan is designed to address the immediate critical needs of the system; however, future restoration efforts would continue to address longer-term restoration needs, as evidenced by the portion of the LCA Plan directed toward large-scale, long-term restoration studies. Additionally, the LCA Plan provides for demonstration projects to answer key uncertainties surrounding pipeline conveyance of sediment and wetland creation. Answering these uncertainties will be paramount in determining the most effective means of direct placement of sediments for marsh creation.

Letter 58: Mr. Gary P. LaGrange, Port of New Orleans (PONO)

PORT OF NEW ORLEANS

Gary P. LaGrange
President and Chief Executive Officer

July 26, 2004

Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Axtman:

The Port of New Orleans supports the critical need to restore Louisiana's coastal area. It is clear that the devastating impact of coastal erosion must be reversed, and we offer this official congratulations to the State of Louisiana, the Corps of Engineers and all the federal and state agencies who participated in the development of the Louisiana Coastal Area Ecosystem Restoration Study. While the plan is a first step in a long term ongoing effort it is nonetheless a monumental achievement in the long term effort to secure Louisiana's future and heritage.

PONO 01

The plan provides a blue print for coastal restoration and it does so in a way which considers and preserves the tremendous positive economic impact of maritime navigation. Clearly the State of Louisiana is a global center for world trade and energy resources and every effort must be made to assure the State's competitiveness in these areas.

PONO 02

We understand that many details have to be worked out and that ongoing studies will provide needed direction but the recommendations with regard to the Mississippi River Gulf Outlet are reasonable. The environmental enhancements recommended, including bank stabilization and beneficial use of the dredge material, would enhance the long term use of this channel while protecting and restoring adjacent wetlands. We support his approach.

PONO 03

The study also calls for the initiation of the Mississippi River Delta Management Study. Such a study is of obvious interest to not only the Port of New Orleans but all the ports on the Mississippi River. Any modification to the existing navigation channel is of major concern to us and we request that we be kept advised as to any future information from this study. We also offer our participation and expertise in the study effort.

Thank you for your fair and balanced treatment of these complex issues.

Sincerely,

Gary P. LaGrange

GPL/crp

BOARD OF COMMISSIONERS OF THE PORT OF NEW ORLEANS

Post Office Box 60046•New Orleans, Louisiana 70160•Tel: 504 528-3203•Fax: 504 528-3397

PONO 01: Comment noted.

PONO 02: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

PONO 03: Comment noted. The USACE will engage the Port of New Orleans on future efforts regarding the Mississippi River Delta Management Study.

Letter 59: Ms. Jennifer B. Armand, Restore or Retreat (ROR)

Restore or Retreat

P.O. Box 2048-NSU • Thibodaux, Louisiana 70310 • (985) 448-4485 • Fax (985) 448-4486
Email: lori.leblanc@nicholls.edu • www.restoreorretreat.org

August 19, 2004

Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, Louisiana
70160-0267

Re: Comments on Draft Study Report for LCA Near-Term Restoration Plan

Dear Mr. Axtman:

The members of Restore or Retreat, Inc. extend their thanks to the U.S. Army Corps of Engineers and the Louisiana Department of Natural Resources for their work in compiling this draft study report for the Near-Term Louisiana Coastal Area (LCA) restoration plan and conducting a recent series of related public meetings. We also acknowledge President George W. Bush and administration officials for expressing their concern for the coastal erosion crisis in our state by supporting this near-term Louisiana Coastal Area (LCA) plan and its proposed authorization in WRDA 2004.

ROR 01

Restore or Retreat, Inc. counts among its membership coastal Louisiana residents, businesses and landowners who recognize that the Barataria and Terrebonne basins in southeast Louisiana are the two most-rapidly eroding estuaries on earth. Our organization is aggressively pursuing sustainability for this region and advocates comprehensive restoration for these basins because of their ecological and economic significance. Therefore, while Restore or Retreat appreciates the support shown by federal officials for this scaled-down restoration plan, we believe that Louisiana's coastal restoration needs are much larger than this $1.9 billion near-term plan can effectively address. Immediate and aggressive long-term action is required if we are to be successful in truly halting southeast Louisiana's hemorrhaging rate of land loss.

Over the past 30 years, the state of Louisiana has initiated and participated in extensive studies of the land loss problem and proposed solutions, and has implemented, with the Corps of Engineers, relatively small-scale restoration projects that provided a wealth of science and engineering knowledge. It is now time to use this good science and engineering toward implementing a large-scale multi-billion dollar coastal restoration program in south Louisiana, without risking loss of the land we have now while valuable time, money and resources are spent on a short-term approach with limited benefits.

On the topic of studies, Restore or Retreat is pleased to see the inclusion of a feasibility study for the Third Delta Conveyance Channel in the LCA near-term plan's list of large-scale

ROR 02

Lori LeBlanc - Executive Director

Alex J. Plaisance, Jr. - President (John Plaisance & Sons, Inc.) • Charlotte Bollinger - Vice-President (Bollinger Shipyards, Inc.)
Roy Francis - Secretary (LA 1 Coalition, Inc.) • Robert Naquin - Treasurer (Hibernia National Bank)
Ronald Blanchard • C. Berwick Duval II (Duval, Funderburk, Sundbery, Lovell & Watkins)
Jerome Zeringue (Terrebonne Levee & Conservation District) • Loulan Pitre - Counsel (Deramee, Allemand, Pitre & Richard, L.L.P.)

ROR 01: Please see General Response #5 regarding the ten-year planning horizon and General Response #10 regarding proposed LCA funding.

ROR 02: Comment noted.

Letter 59: Ms. Jennifer B. Armand, Restore or Retreat (ROR)

studies proposed for conventional authorization. The Third Delta project represents the most significant land-building opportunity for the Barataria and Terrebonne basins, which account for 60 percent of the entire state's land loss. We urge the administration and Congress to expedite funding for the study through the Corps' budget process to ensure timely implementation of this key restoration effort and provide an opportunity to complete the study in the LCA near-term plan's five-to-ten-year timeframe.

For the past year, the Louisiana Department of Natural Resources has been working on a state-funded $1 million reconnaissance-level study of the Third Delta project, and with the study expected to wind down at the end of this year, state and Corps officials have indicated their willingness to proceed directly to the full-blown feasibility study in 2005. Appropriate and timely funding allocation for the study will allow this schedule to proceed uninterrupted.

ROR 02 (Continued)

With regard to other projects within the suffering Barataria and Terrebonne basins, Restore or Retreat supports the Bayou Lafourche freshwater reintroduction project as a "Near-Term Critical Restoration Feature" in the LCA plan. We also support a modification of the Davis Pond project focusing on marsh creation, multi-purpose use of the Houma Navigation Canal Lock, barrier island restoration projects in the Barataria and Terrebonne basins, a pipeline sediment diversion demonstration system and re-distribution of Atchafalaya River water to northern Terrebonne marshes. Our hope is that implementation of these projects does not lag due to their need for "conventional authorization" under the draft LCA plan.

ROR 03

All of these projects combined, including the Third Delta, offer the Barataria and Terrebonne basins an opportunity to maintain our existing coastal resource and establish a naturally systemic process for sustaining our coast in the long-term. However, we must move these projects expeditiously from study to construction to realize the greatest benefits.

In conclusion: With land loss rates of 25 to 30 square miles a year, it is doubtful that merely the top five construction projects proposed for programmatic authorization in this near-term LCA plan alone will provide the significant land-building opportunities required to ensure the long-term survival of south Louisiana, and the valuable national resources and infrastructure that go with it. Louisiana has waited twenty years or more to get to this stage of federal action, and we cannot afford to wait decades longer as the other projects listed in LCA await conventional authorization and individual appropriations. A comprehensive coastal restoration plan and associated funding is needed now to match the magnitude of our coastal land loss problem, especially in the area hit hardest—the Barataria and Terrebonne basins.

ROR 04

Sincerely,

Jennifer B. Armand

Jennifer B. Armand
Interim Executive Director
Restore or Retreat, Inc.

ROR 03: Comment noted.

ROR 04: Comment noted.

Letter 60: Mr. Jack Tatum, Sabine River Authority (SRA)

A GOVERNMENT AGENCY OF THE State of Texas

SABINE RIVER AUTHORITY of Texas

(409) 746-2192
FAX (409) 746-3780

P.O. BOX 579
ORANGE, TEXAS
77630

August 20, 2004

Mr. Timothy Axtman, P. E.
Project Manager, Coastal Restoration Branch
U.S. Army Corps of Engineers
PO Box 60267
New Orleans, LA 70160-0267

Dear Mr. Axtman:

The Sabine River Authority of Texas (SRA-TX) appreciates this opportunity to submit comments on the Louisiana Coastal Area (LCA) Ecosystem Restoration Study. As a Conservation and Reclamation District created by an act of the Texas Legislature in 1949, the SRA-TX has the responsibilities to control, store, preserve, and distribute the waters of the Sabine River and its tributary streams in Texas for useful purposes. SRA-TX and Sabine River Authority, State of Louisiana (SRA-LA) jointly own and operate Toledo Bend Reservoir; have a vested interest in the lower Sabine River; own and operate diversion pumping plants and canal systems in Orange County and Calcasieu Parish; and work with various local, regional, and state entities on issues related to the Sabine Lake Estuary. In addition to Toledo Bend Reservoir, SRA-TX owns and operates Lake Tawakoni and Lake Fork Reservoirs in the Upper Sabine River Basin in Texas. SRA-TX has taken an active role in water supply and water quality matters since initial operational activities began in 1954 and has the responsibility to manage the long-term water supply needs of the Sabine River Basin, Texas.

SRA 01

The SRA-TX primary areas of concern in regards to the LCA are Sabine Lake, the associated marsh system (fresh, intermediate, and salt marshes) in Texas and Louisiana, and the freshwater inflows from the Neches, Sabine and Coastal Basins (gauged and ungauged). The secondary areas of concern would be the Calcasieu Lake Estuary system to the east in Louisiana and the Galveston/Trinity Estuary system to the west in Texas, and how these estuary systems interact with the Sabine Lake Estuary system, naturally as well as through anthropogenic changes including the intracoastal waterway, shipchannels, and secondary channels.

SRA 02

The information presented in the LCA Study attributes the development of the Chenier Plain wetland ecosystem to an interaction of the coastal rivers (Sabine, Calcasieu, and Mermentau Rivers), the intermittent mudstream from the Mississippi River outlets, and the Gulf of Mexico. The mudstream from the Mississippi River is cited as the primary source of wetland development, but the extent of the contribution to wetland development from sediments deposited by the other rivers does not appear to be

SRA 01: Comment noted. Attention is being paid to these issues in our current and ongoing modeling effort of the Chenier Plain.

SRA 02: A current study of the Chenier Plain funded by the Coastal Restoration and Enhancement through Science and Technology (CREST) and Louisiana Department of Natural Resources is addressing the interaction between the open water bodies, the ship channels, and secondary channels that run east to west and north to south through the Sabine National Wildlife on the hydro period, salinity, and sediment of the adjacent marsh areas. This study is comprehensive in scope and it encompasses the entire Chenier Plain (from Fresh Water Bayou on the east to Sabine Lake on the west). This study will quantify fresh water, sediment, and nutrients entering and leaving the system.

Letter 60: Mr. Jack Tatum, Sabine River Authority (SRA)

SABINE RIVER AUTHORITY of Texas

Page 2
U.S. Army Corps of Engineers/August 20, 2004

SRA 02 (Continued)

SRA 03

defined. Has the contribution from these other river systems been studied and defined? The role of laminar flow from the surrounding coastal areas into the Sabine Lake Marsh System does not appear to be addressed. How have the secondary channels that run east to west and north to south through the Sabine National Wildlife Refuge and adjacent areas south of the intracoastal waterway exacerbated saltwater intrusion into these marsh areas and subsequent loss of vegetation? The study does not appear to quantify the sediment, nutrients, and freshwater lost from the wetlands as a result of changes to the hydrology from the creation and maintenance of ship channels and intracoastal waterway that have resulted in freshwater inflows from the coastal areas being short-circuited through the channels into the Gulf of Mexico.

SRA 04

The report states that saltwater intrusion into the estuary systems is dependent on the amount of freshwater traveling downstream and the depth of the channels and/or canals. The report attributes saltwater intrusion as the "principal factor in the conversion of freshwater habitats to saline habitats," and attributes the conversion of wetlands to open water due to extreme salinity changes that stress vegetation. Additionally, the report states that left unchecked "Salinity gradients across the coast would migrate north and become more narrow and variable without ***additional inputs of freshwater from riverine sources to hold back gulf waters***." However, the study does not identify the additional freshwater resources that could be used for this purpose. The additional 8 inch rise in sea level over the next 50 years predicted in the study will certainly cause salinity gradients to migrate further north, but it is not clear if additional freshwater sources are being targeted to hold back these additional Gulf waters. How are the impacts from salinity gradients migrating through the ship channels, intracoastal waterway, and secondary canals being reduced in areas **where natural freshwater inflows are not sufficient or available to overcome this saltwater intrusion?**

SRA 05

The proposed restoration features for the Chenier Plain include dedicated dredging and beneficial use / Marsh Creation and Restoration, salinity controls, hydrologic modification, and barrier island, barrier headland, and interior shoreline protection and restoration. The restoration features being considered for the Sabine Lake Estuary also include marsh restorations, freshwater introductions, Sabine Pass Lock, and salinity controls. The report further identifies salinity control as the "Keystone Strategy" for the Chenier Plain. Additionally, the report cites increased water demands in Texas as a major threat to freshwater inflows that prevent salinity encroachment up the Sabine River. What is the basis for this statement? Are there studies available to support this statement?

SRA-TX is involved in water supply planning to meet 50-year planning horizon needs in the Upper Sabine Basin, Texas. This planning involves moving water via pipeline from Toledo Bend Reservoir to the Upper Sabine Basin demand areas. As part of this planning process, one alternative being evaluated is teaming with other North Texas water suppliers in the Dallas/Ft. Worth Metroplex Area to meet long term water supply needs for this area. These planning efforts are part of a greater Texas State Water Plan process by which the Texas Water Development Board (TWDB) under Senate Bill 1 develops local and regional water plans to form the basis of the State Water Plan. Environmental planning for the Texas State Water Plan has established a goal to provide adequate water to maintain instream flows and freshwater inflows to bays and estuaries when considering the environmental impacts of water management strategies.

In addition, the TWDB and the Texas Parks and Wildlife Department (TPWD) have been mandated by the Texas Legislature to determine the amount and timing of

SRA 03: Additional fresh water sources include Grand and White lakes. The study described in the response to Comment SRA 02 also provides quantitative assessment of the feasibility of using fresh water from these two lakes to hold back salinity intrusion. The study will also quantify the impact of salinity intrusion through deep ship channels and through the Gulf Intracoastal Waterway (GIWW).

SRA 04: The definition of saltwater intrusion in the report has not been modified. Degradation or modification in the ecosystem that may also result in intrusion without changes in available flow is defined as habitat switching. The solutions available in areas where this is the case are quite limited. Typically they include features to mechanically create marsh, which may be limited by availability of sediment, or features to physically exclude saltwater from an area. Exclusion or barrier features involve an additional set of environmental tradeoff issues and uncertainties. It was for these very reasons that no near-term critical features were proposed in Subprovince 4.

SRA 05: The referenced statement was from the October 2002 report prepared for the Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority, entitled "Hydrologic Investigation of the Louisiana Chenier Plain" (HILCP) (LCWCRTF and WCRA, 2002).

Letter 60: Mr. Jack Tatum, Sabine River Authority (SRA)

SABINE RIVER AUTHORITY of Texas

freshwater inflows necessary to maintain the biological integrity of Texas Bays and Estuaries. The Sabine Lake Estuary is the most recent Texas Bay and Estuary System to be studied. A draft report entitled "Freshwater Inflow Recommendation for the Sabine Lake Estuary of Texas and Louisiana" has recently been prepared. SRA-TX is also currently working with TPWD, TWDB, and Texas Commission on Environmental Quality (TCEQ) to study instream flow needs in the Lower Sabine River downstream from Toledo Bend.

SRA-TX would like to also provide our comments on one other area of concern in the LCA Study. In Volume 2, the Programmatic Environmental Impact Statement (PEIS) states that "The Sabine River Basin Coastal Bays and gulf waters are not supporting propagation due to mercury from atmospheric deposition." Although no source for this is indicated, we believe it refers to Louisiana Segment 110701 which is not within the defined LCA Study Area (see attached comments). SRA 06

SRA-TX is taking a lead in managing the water resources in the Sabine Basin, and is engaged in an approach to ensure that the surface waters are utilized to provide the best benefit for the Basin and the State of Texas while taking into consideration the economic and environmental factors involved. SRA-TX believes that future operation of Toledo Bend Reservoir for water supply purposes could allow future operations to more closely mimic natural flow conditions. SRA 07

In closing, SRA-TX recommends that the LCA ecosystem restoration efforts for the Sabine Lake Estuary system be coordinated with efforts in Texas that also involve the Sabine Lake Estuary and associated marsh system. Once again, we appreciate this opportunity to provide our comments and look forward to working with the U.S. Army Corps of Engineers to address the water resource needs in the Sabine Basin. SRA 08

Sincerely,

Jack W. Tatum
Water Resources Manager
Sabine River Authority of Texas

Attachment (1)

JWT:MAH:jeb

cc: Jim Pratt, Sabine River Authority, State of Louisiana
Scott Hall, Lower Neches Valley Authority
David Parkhill, Turner Collie & Braden
Dave Buzan, Texas Parks & Wildlife Department
Barney Austin, Texas Water Development Board
Doyle Mosier, Texas Commission on Environmental Quality
Dan Llewellyn, Louisiana Department of Natural Resources
Gary Graham, Schaumburg & Polk, Inc.
Dr. Williams P. Klein, Jr., U.S. Army Corps of Engineers

SRA 06: Comment noted. However, Chapter 3 provides a characterization of the existing conditions in the Sabine Basin, especially in the coastal water bodies. The statement in the FPEIS does refer to the water quality subsegment, 110701. The information was cited from LDEQ's 2002 Water Quality Inventory Section 305(b) Report as mentioned throughout Section 3.15 of the FPEIS.

SRA 07: Comments noted.

SRA 08: The USACE thanks the SRA for their time and efforts in reviewing the LCA report and looks forward to working with SRA on the LCA Program.

Letter 60: Mr. Jack Tatum, Sabine River Authority (SRA)

SABINE RIVER AUTHORITY of Texas

Volume 2: Programmatic Environmental Impact Statement (PEIS)

SRA-TX has a concern with the statement on page DPEIS 3 – 64 that, "The Sabine River Basin Coastal Bays and gulf waters are not supporting propagation due to mercury from atmospheric deposition." While no source for this statement is indicated, we believe it is in reference to the listing of Louisiana Segment 110701, *Sabine River Basin Coastal Bays and Gulf Waters to the State three-mile limit*, on the State of Louisiana 303(d) List of Impaired Waterbodies as Partial Support for Fish and Wildlife Propagation due to unknown source of atmospheric deposition of Mercury. Our concerns with this are as follows:

1) The statement should include the complete, proper segment designation as defined in Louisiana Segment in Title 33 of the State of Louisiana Environmental Regulatory Code[1] and reference to the Louisiana 303(d) listing for partial support of the Fish and Wildlife Propagation Designated Use should be given. SRA 09

SRA 10 2) Segment 110701 is not within the LCA Study Area, specifically Subprovince 4 (the Chenier Plain), as shown on **Figure S-1. The LCA Study Area** (DPEIS S-4).

3) Including the statement regarding Segment 110701within the scope of the water quality conditions of Subprovince 4 incorrectly infers that the Sabine Basin is impaired for the Fish and Wildlife Propagation Designated Use. According to the Louisiana 303(d) lists (1998, 2000, 2002, 2004) available through the Louisiana Department of Environmental Quality (DEQ) Total Maximum Daily Load (TMDL) Program[2] those Segments comprising the Sabine Basin portion of Subprovince 4[3] are not impaired for this Designated Use. SRA 11

SRA 12 Realizing that affects of atmospheric deposition of mercury on water quality cross political boundaries, SRA-TX believes that this issue is one of the common concerns Texas has with Louisiana and welcomes working with appropriate Federal and Texas and Louisiana state agencies to address it.

[1] http://www.deq.state.la.us/planning/regs/title33/, referenced 8/16/2004 2:17 PM.
[2] http://www.deq.state.la.us/technology/tmdl/, referenced 8/16/2004 2:31 PM.
[3] Segment 110301 – Sabine River-Confluence with Old River below Sabine Island Wildlife Management Area to Sabine Lake; Segment 110302 – Black Bayou-From boundary between segments 1103 and 1106 to Sabine Lake; Segment 110303 – Sabine Lake; Segment 110304 – Sabine Pass; and Segment 110602 – Black Bayou – Intracoastal Waterway to boundary between segments 1103 and 1106.

SRA 09: Comment noted. The information was cited from LDEQ's 2002 Water Quality Inventory Section 305(b) Report as mentioned throughout Section 3 of the FPEIS.

SRA 10: Comment noted. Figure S-1 is a general representation of the 4 subprovinces used during the LCA Study planning efforts.

SRA 11: Comment noted. However, Chapter 3 provides a characterization of the existing conditions in the Sabine Basin, especially in the coastal water bodies. The statement in the FPEIS does refer to the water quality subsegment, 110701. The information was cited from LDEQ's 2002 Water Quality Inventory Section 305(b) Report as mentioned throughout Section 3 of the FPEIS.

SRA 12: Comment noted.

Letter 61: Sherrill Sagrera (SJS)

PROPERTY MANAGEMENT PLUS 310 901:2141 P.01

August 18, 2004

William P. Klein, Jr. Ed. D.
U. S.. Army Corps of Engineers
P. O. Box 60267
New Orleans, LA. 70160-0267

Dear Mr. Klein,

The LCA Plan is missing a critical area of national importance in sub-province 3 in Vermilion Parish. That being the Henry Hub.

Just a few facts:

1) 41% of the nation's natural gas passes through or near the Henry Hub in Vermilion Parish.

2) The daily price the nation pays for natural gas is set at the Henry Hub in Vermilion Parish.

To that end, there needs to be some consideration focused on this critical infrastructure in LCA. The gauges, level controls and control devices do not operate well under water.

Just consider the interruption of 41% of natural gas to the north east (homes and factories during winter) for a week or so. Not to mention all the wells that have to be shut in because there is no place to send the gas.

Please consider my comments. I look forward for your feedback. Thanks for the opportunity to make comments on LCA Plan.

SJS 01

Sincerely,

Sherrill J. Sagrera

SJS 01: Since the Henry Hub facility is located outside of the coastal zone in an area with little if any predicted land loss, this area would not meet critical needs criteria in selecting near-term restoration projects. In addition, the protection of such infrastructure is not limited solely to solutions involving wetland restoration. Future investigations of large-scale, long-term restoration will attempt to better integrate the value of wetlands in minimizing damages to infrastructure on a broad scale.

Letter 62: Mr. Harvey Stern, Sierra Club, New Orleans Group, Delta Chapter (SCDC)

SIERRA CLUB

New Orleans Group, Delta Chapter

740 7th St
New Orleans LA 70115
August 22, 2004

Dr. William P. Klein
CEMVN-PM-RS
New Orleans District, USACE
P.O. Box 60267
New Orleans, LA 70160

Ref: comments on draft LCA EIS

Dear Dr. Klein:

The New Orleans Group of the Sierra Club offers the following comments on draft LCA EIS:

As the Louisiana Coastal Assessment (LCA) study develops alternatives for the comprehensive restoration and stewardship of our coast, it is vital that certain key features lie at the heart of that effort if it is to fulfill its objectives and command public support. The ultimate selection of a preferred alternative should reflect the following key features, and any discussion of alternatives must address those features clearly, honestly and adequately.

Key Features:

SCDC 01

1. Guiding Principles:
It is essential that both the planning and the implementation of the LCA be governed by clearly stated guiding principles which are integrated into all aspects of this coastal campaign. The Guiding Principles formally adopted by the Governor's office and attached hereto must be embraced by all involved local, state and federal agencies, and broadly communicated to local governments and the public. The Programmatic Environmental Impact Statement (PEIS) must have a Preface that includes these guiding principles.

Regional Groups in Louisiana : Acadian · Baton Rouge · Honey Island · Kisatchie · New Orleans

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1

SCDC 01: The environmental operating principles, guiding principles, and planning objectives are described in section 2 of the FPEIS. Part 1502.12 of the NEPA states that each environmental impact statement shall contain a summary, which adequately and accurately summarizes the statement. The summary shall stress the major conclusions, areas of controversy (including issues raised by agencies and the public), and the issues to be resolved (including the choice among alternatives). The summary will normally not exceed 15 pages.

Letter 62: Mr. Harvey Stern, Sierra Club, New Orleans Group, Delta Chapter (SCDC)

2. River Systems:
The plans for restoring our coast should be focused on restoring, to the greatest extent practicable, the natural riverine processes that built and sustained this region. This includes: 1) the reintroduction of river waters and sediments to the natural flood plain and 2) the restoration of sheet flow characteristics. The LCA plan must consider fully all river resources, including the Atchafalaya River. Existing and proposed fresh water diversion projects should be given priority over the proposed Caminada Barrier island restoration proposal, which is likely to have a significantly higher cost-to- benefit ratio than the fresh water diversion projects We also request that priority status be given to the two existing fresh water diversion projects to modify them as sediment diversions. The Caernarvon diversion (Subprovince 1) and Davis Pond diversion (Subprovince 2) are already in operation. SCDC 02

3. Science-Based Projects:
The LCA must incorporate the best available science and engineering. Hydrologic and ecologic models must be developed and refined for our entire coast to help plan, design and implement coastal restoration projects. Funding for modeling and project evaluation should be included in the LCA budget for the life of the project-- Corps staff should have lead responsibility for assuring that project evaluation and hydrological and ecological modeling are explicily included during **all** phases of project implementation. The LCA should incorporate new scientific data gathered during project monitoring into future projects and planning. SCDC 03

To expedite this important aspect of the plan, the LCA must create a management structure that can effectively implement and operate a comprehensive, multi-agency effort that is: 1) scientifically sound; 2) ecologically focused; and 3) publicly accountable. This must include a peer review by credible, independent scientists and a public participation process. The final EIS should incorporate this management structure and specify its functions.

4. Consistency (Permitting):
Wetland protection and controls on development must be integral parts of the LCA comprehensive plan in order to: 1) be better stewards of our resources, 2) facilitate effective coastal restoration efforts to maximize benefits, 3) discourage the location of new development in "harm's way" such as floodplains and 4) promote the protection of intact, functioning wetland systems throughout the regulatory process. Executive Order 11988, guidelines on floodplain management, should be used to avoid loss of life and property. In short, there must be a re-evaluation of the regulatory program to avoid undermining restoration objectives. SCDC 04

The draft EIS is virtually silent on all the wetland loss created thru continued 404 permitting of non-wetland dependent projects (commercial, residential. and industrial development and infrastructure--including levees-- to serve these developments) throughout the LCA project area. Non-wetland site alternatives for proposed projects in the LCA project area not given SCDC 05

2

SCDC 02: The inclusion of fresh water diversions in Subprovince 1 and 2 confirm the LCA Plan's emphasis on restoring natural riverine processes as an integral part of the restoration effort.

SCDC 03: Comment noted.

SCDC 04: The New Orleans District regulatory program is consistent with all regulatory regulations and guidance. The overall public interest evaluation considers the value and importance of LCA projects and how the permitted activity will affect them.

SCDC 05: The Louisiana Coastal Restoration Division develops, implements, and monitors coastal vegetated wetland restoration, creation and conservation measures. It performs engineering, planning, and monitoring functions essential to successful development and implementation of wetland conservation and restoration plans and projects as directed by the Coastal Wetlands Conservation and Restoration Plan. The mission of the USACE Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The USACE evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. USACE permits are also necessary for any work, including construction and dredging, in the Nation's navigable waters. The USACE balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. During the permit process, the USACE considers the views of other Federal, state, and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the U.S.

Letter 62: Mr. Harvey Stern, Sierra Club, New Orleans Group, Delta Chapter (SCDC)

SCDC 05 (Continued)

serious consideration by permitting agencies. Off site mitigation of questionable value is too often given priority over on-site mitigation requiring significant reduction of wetland loss on the project site. **The yearly loss of wetlands from 404 permitted activities in the LCA project area should be determined and made part of the EIS**. Any benefits from the proposed projects should be explicitly offset against 404 permit wetland loss in the FEIS

SCDC 06

Any serious effort to address consistency must should also be assess wetland/water dependent activities (especially oil and gas exploration and infrastructure) for their negative impact on restoration efforts. **Wetland losses from canal dredging and similar permitted activities in the project area over the past ten years should be calculated and included in an FEIS analysis of projected impact on wetlands of future permitted oil and gas activity in the project area**. The FEIS must include in its cost benefit analysis of proposed restoration projects the impact of past and future man-made impacts on wetlands in the project area.

SCDC 07

We recognize that the Corps regulatory branch of the Corps has been perpetually under funded-- this clearly affects the Corp's efficiency in "consistency" monitoring. Col. William Conner's (NOD) comments were correct when he stated, "Regulatory is deliberately under funded each year as part of the grand game of give and take between private interests and public oversight." (Conner, 1999).
We request that the FEIS include a statement of support for funding of Corps' Regulatory personnel specifically used for the LCA plan.
Presently the Enforcement Section is understaffed and the number of permit inspectors is insufficient to handle existing permit applications or to assure that permittees are in compliance with mitigation requirements. The lack of adequate field inspections promotes permit violations. New Orleans District Corps does not have sufficient staff to find and stop illegal work in wetlands of the Coastal Zone.

SCDC 08

5. The MRGO and other Public Works Projects:
Public works projects need to be harmonized with the LCA to secure maximum benefits from those projects and to avoid undermining all restoration activities. There should be a re-evaluation of all state and federal public works projects in the coastal zone or in areas that significantly affect our coastal zone including, as appropriate, those in the upper Mississippi River basin. This re-evaluation should focus on how projects can be better operated or harmonized to be consistent with the objectives of the LCA. For example, the plan must incorporate major projects such as the Mississippi River Gulf Outlet (MRGO) and how to facilitate its closure.

The FPEIS should include a plan for closure of the MRGO. This waterway is one of the major contributors to adverse environmental impacts in Subprovince 1. Continuing to dredge the MRGO is inconsistent with the goals of the LCA. The Corps must develop, as part of the LCA plan, a procedure to deauthorize the MRGO with the provision that salt water intrusion into

3

SCDC 05 (Continued): The adverse impacts to the aquatic environment are offset by mitigation requirements, which may include restoring, enhancing, creating and preserving aquatic functions and values. The USACE strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public. As noted in the discussion of proposed estates in Section 4 of the Main Report, some estates will prohibit surface use whereas other estates will restrict surface use. The consistency determination will be made by the appropriate representative for the United States and/or the State of Louisiana to ensure that the integrity of the project is not compromised.

SCDC 06: Please see response to SCDC 05.

SCDC 07: Please see response to SCDC 05.

SCDC 08: Please see General Response #1 regarding the proposed MRGO Restoration Feature. The USACE recognizes the role that existing water control structures in the Louisiana coastal area can play in meeting the LCA Program objectives, as evidenced by the recommendation for programmatic authority for investigation of modifications to existing structures. Consistency between all publically directed activities, particularly future actions, in the coastal area is an important objective. The reevaluation of existing public works projects authorized and funded through either Federal, state, or local government action, however, will need to be addressed on a case-by-case basis. The particular government entity that invested in any given action has done so with some expectation of future or ongoing return that must be addressed coincident with the potential environmental return resulting from possible modification. The detail of these comparative analyses vary widely from activity to activity.

Letter 62: Mr. Harvey Stern, Sierra Club, New Orleans Group, Delta Chapter (SCDC)

SCDC 08 (Continued)

fresh water marshes and Lake Pontchartrain will be stopped. Tidal surges using the MRGO carry contaminated sediments from the IHNC into Lake Pontchartrain. This is continuing to damage the Lake's ecosystem. The Corps noted in the DPEIS (Vol. 2, Sec. 1.9.6) that a Reevaluation Study of the MRGO, "is tentatively scheduled for completion by September 2004". We request that the conclusions of the study be included in the Final PEIS.

SCDC 09

6. Sediment and Water Quality:
Sediment and water used for LCA projects shall meet state and federal standards. These must also include the National Oceanic & Atmospheric Administration (NOAA) sediment standards for benthic organisms to safeguard public health and the environment. Appropriate testing and monitoring of water and sediment quality must be completed prior to construction or implementation of the project.
According to the Memorandum signed by Major General Russell L. Fuhrman, Director of Civil Works, (Oct. 1998), entitled; Use of Sediment Quality Guidelines (SQGs) in dredged Material Management Decision Making, he states:
"As mandated under the Section 404 of the Clean Water Act (CWA) and Section 102 of the Marine Protection Research and Sanctuaries Act (MPRSA), the Corps is required to employ an effects-based testing protocol when dredged material is proposed for open water placement, or those instances when placement is an upland environment results in effluent discharge through a weir back into waters of the United States." (USACE, 1998a)

The screening of sediments to be dredged should be a standard operating procedure for an environmental project as extensive as the LCA. Reconnaissance sampling of sediments for each area to be dredged would provide the information needed to determine whether further examination of the area is warranted. If a common sense approach is used, it would not be an expensive procedure. If a Tier 1 evaluation shows a reason to believe that there may be a contamination problem, then the NOAA screening standards could be used to determine whether a Tier 2 review is necessary. If the ER-M is met or exceeded then there is reason to believe that the sediments have acute toxicity. Additional bioassays would then be necessary.

Sediment and water used for LCA projects must meet state and federal standards. Chemical analyses of sediments should be compared to the National Oceanic & Atmospheric Administration (NOAA) sediment standards for benthic organisms to safeguard public health and the environment. Appropriate testing and monitoring of water and sediment quality must be completed prior to construction or implementation of any project.

Thank you for giving serious consideration to these comments.

4

SCDC 09: The Clean Water Act 404 (b)(1) Guidelines (40 CFR 230) are the environmental criteria for evaluating the proposed discharges of dredged or fill material into waters of the United States. Compliance with these guidelines is the controlling factor used by the USACE to determine the environmental acceptability of disposal alternatives. The USACE must demonstrate through completion of a 404 (b)(1) evaluation that any proposed discharge of dredged material is in compliance with the guidelines. In the 1999 report, "Sediment Quality Guidelines developed for the National Status and Trends Program" (available on NOAA's website http://response.restoration.noaa.gov/cpr/sediment/SPQ.pdf). NOAA states that the sediment quality guidelines ("NOAA sediment standards" that you refer to in your comment), "were not promulgated as regulatory criteria or standards. They were not intended as cleanup or remediation targets, nor as discharge attainment targets. Nor were they intended as pass-fail criteria for dredged material disposal decisions or any other regulatory purpose." Additionally, in the "Screening Quick Reference Tables" developed by NOAA which present screening concentrations for inorganic and organic contaminants in various environmental media, i.e. ER-L, ER-M, etc., it is stated that, "these tables are intended for preliminary screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels." Section 4 of the PEIS contains language referencing the *Evaluation of dredged material proposed for discharge in waters of the U.S. – Testing Manual* (EPA/USACE, 1998), i.e. the Inland Testing Manual, testing protocols and the USACE's intention to employ these and/or similar guidelines for evaluating the proposed discharges of dredged or fill material into waters of the US. This manual outlines a "common sense" approach as you requested in the comment.

Letter 62: Mr. Harvey Stern, Sierra Club, New Orleans Group, Delta Chapter (SCDC)

Sincerely,

Harvey Stern

Harvey Stern
Wetlands Sub-Committee
New Orleans Group, Sierra Club
hrstern@juno.com / 504-581-7116

cc EPA-- Dallas

5

SCDC 09 (Continued): The manual utilizes both chemical and biological analyses as necessary to provide effects-based conclusions within a tiered framework (four tiers) with regard to the potential for contaminant-related water column, benthic toxicity, and benthic bioaccumulation impacts. Additional language will be incorporated into Section 4 of the FPEIS to further explain the USACE processes for the above.

Letter 63: Mr. Windell A. Curole, South Lafourche Levee District (SLLD)

SOUTH LAFOURCHE LEVEE DISTRICT
BOARD OF COMMISSIONERS
POST OFFICE BOX 426
GALLIANO, LOUISIANA 70354

(985) 632-7554
Fax: (985) 632-7555

August 10, 2004

USACE – N.O. DISTRICT
ATTN: TIM AXTMAN
PO BOX 60267
NEW ORLEANS, LA 70160

Sub: Louisiana Coastal Area (LCA), Louisiana
Ecosystem Restoration Study
LCA Study-Main Report, Vol. 1 (Draft)

Dear Tim,

Attached are my comments to the Corps of Engineers on above subject report. Please feel free to contact me at (985) 632-7554 should you require anything further.

Sincerely,

Windell A. Curole
General Manager

/mp

Letter 63: Mr. Windell A. Curole, South Lafourche Levee District (SLLD)

COMMENTS

Louisiana Coastal Area (LCA), Louisiana

Ecosystem Restoration Study

July 2004
Draft
Volume 1: LCA Study-Main Report

The LCA Report is an attempt to begin the process of dealing comprehensively with the problem of land loss in South Louisiana. We support the report and hope to have quick action.

SLLD 01

Several areas were not addressed as well as we believe is necessary. The first is that the problems caused by land loss in South Louisiana are not in the future. From moving our oyster beds to moving our communities, the land loss problem has affected and cost our society both environmentally and socio-economically. It is affecting our ability to protect our communities from flooding to the availability of fresh water. The problem is here and now; lack of action will only allow the problems to get much worse for more parts of South Louisiana.

The study has not made a strong statement on the loss of our ridges and the threat to our communities. Data suggests that only communities protected by hurricane protection levees will exist into the future. The sinking of our ridges coupled with the loss of marsh and barrier islands make all communities at increasing risk to flooding.

Restoration of our marshes and barrier islands will reduce storm surge. But with the most optimistic expectations for restoration, these natural barriers will not stop the problem of subsidence. Our communities will have to address the problem by levees or retreat. We believe that today many of our communities may not survive into the future if the communities are greatly affected by a hurricane. We believe that the state and federal government may refuse to not only rebuild the community, but more importantly, not rebuild the damaged infrastructure needed by the community. We believe that this discussion should be included in all restoration reports.

The near term projects when viewed in the context of the entire coast are only holding actions. It is important that we do the short term projects, but we must face the reality that the areas and communities being affected the worst will not be improved greatly by these projects. These communities will continue to see greater problems without the timely construction of major projects.

SLLD 02

We support the LCA Report. With that support, all of us must still deal with the losses that will not be restored. Restoration and flood protection should be spoken and dealt with at the same time. Both issues will determine where the 2,000,000 south Louisiana residents will live. Although communities are not the central theme of the LCA Report, it is the issue which will frame both our expectations and the chance for success.

Windell A. Curole
General Manager - South Lafourche Levee District
August 3, 2004

Page 1 of 1

SLLD 01: As outlined in Section 6 of the LCA Main Report, USACE is required to coordinate and comply with various statutory authorities including: environmental laws, regulations, Executive Orders, policies, rules and other guidance. This includes consideration of public safety and public use of water resources. Protection of vital socioeconomic resources is one of the critical needs elements addressed by the near-term LCA Plan (Critical Needs Criterion #4). The proposed restoration features in the LCA Plan address the need to protect such resources as cultures, communities, infrastructure, business and industry, and maintain flood protection.

SLLD 02: Comment noted.

Letter 64: Mr. David Arceneaux, St. Bernard Parish Government, Coastal Zone Advisory Committee (SBPGDA)

St. Bernard Parish Government
8201 West Judge Perez Drive Chalmette, Louisiana 70043
(504) 278-4200 Fax (504) 271-7343

July 27, 2004

Mr. Tim Axtman
CEMVN-PM-C
P. O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on the Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study

Dear Mr. Axtman:

SBPGDA 01

While closure of the Gulf Outlet and restoration of damage caused by this man-made arm of the sea is of paramount importance to the people of St. Bernard Parish, it is only one component of coastal restoration. Most of the area of our parish is occupied by vast saline marshes, estuarine nursery areas, barrier islands, and reefs that represent an invaluable resource to the people of our parish, the state of Louisiana and neighboring states, to the ecology of the Gulf of Mexico, to the nation and our Mexican neighbors. Our cultural heritage is rooted in the harvest and use of the renewable resources of these rich wetlands and shallow waters. Our bounty has been shared with commercial fishermen of neighboring states, particularly Mississippi, Alabama and Florida.

SBPGDA 02

St. Bernard has a demonstrable record of trying to protect and enhance its environmental heritage. The Parish has participated in Louisiana's Federally approved coastal management program since its inception in 1980. St. Bernard was the first parish in Louisiana to attain approval for its local plan, and has spelled out and documented baseline conditions, problems and goals for restoration. Most recently these have been updated in a *Revised Coastal Management Document* and re-stated in a more concise form in a paper entitled "Mississippi River Gulf Outlet: Moving Toward A Solution." Both of these documents are included as attachments to our statement. It is disconcerting to note that St. Bernard's coastal management plan and other technical report that formally express the vision of St. Bernard Parish for management of its coastal resources are not even cited in the LCA document.

SBPGDA 03

The omission of reference to St. Bernard's coastal management plan is an indication of another deficiency of the LCA process. While the coastal restoration program, CWPPRA, the Coast 2050 program and planning efforts of the Pontchartrain Basin Program were all designed for maximum stake holder participation, the LCA process was given minimum public exposure and conducted almost in secret. In fact, the reports of the work of the LCA team, which was virtually sequestered for the duration of the study, were only recently made available for public review. Information provided at public meetings was sketchy and insufficient for stakeholder input.

SBPGDA 01: Comment noted.

SBPGDA 02: The USACE recognizes that there is a large amount of information available regarding coastal preservation and restoration and that not all of the information was referenced in the LCA Plan. In response to public comment regarding this issue, a critical responsibility of the S&T Office will be data assimilation and management to ensure that information from as many resources as possible is incorporated into the continued development of the plan. Additionally, local planning efforts will be revisited as a component of large-scale, long-term studies.

SBPGDA 03: Comment noted. Section 5 in the LCA Plan, Section 5 in the FPEIS, and Appendix F provide detailed information regarding the public involvement and coordination of the LCA Plan. All permitting requirements were met and additional coordination and public outreach has occurred and will continue to occur throughout implementation of the LCA Plan.

Letter 64: Mr. David Arceneaux, St. Bernard Parish Government, Coastal Zone Advisory Committee (SBPGDA)

Mr. Tim Axtman
July 27, 2004
Page 2

SBPGDA 04

Why is the LCA document not in sync with St. Bernard's official coastal management plan, which is an expression of public vision produced through a state and federally approved coastal management program? Will the proposed LCA program supercede the presently authorized coastal management program? Should the old program be abolished? What about consistency provisions of the existing coastal management program? Is "the new plan" a step backward from Coast 2050 plan, which utilized parish coastal zone planning committees in its plan formulation? The management structure proposed in the LCA document provides less input into the decision making process for St. Bernard and other coastal parishes than the presently authorized coastal management program. The framework for this process is already in place through the local-state-federal coastal management program. The proposed LCA program should utilize this framework and not become another competing bureaucracy.

SBPGDA 05

Wise expenditure of tax dollars?

SBPGDA 06

The funds being requested for this program are not "free money." Both the federal and state components consist of tax dollars, and their use competes with other worthy national, state and local uses. Federal contribution requires a significant state match (35% for implementation, but greater for planning, feasibility, etc.) Because tax dollars are desperately needed for education, health care, infrastructure repair and improvement, police and fire protection and other obligations at all levels of government, it is incumbent that we not allow our long-term environmental problems, particularly related to the MRGO, that have gained national attention to be used to divert scarce tax dollars to funding duplicative, wasteful programs. This program may St. Bernard Parish's best and only shot at meaningful coastal restoration. For all of these reasons we offer constructive criticism and suggestions and demand a formal position in the decision making process.

Science and Technology

SBPGDA 07

We also have concerns about the magnitude of funding, particularly the proposed structure of the Science and Technology Program. This appears to be an attempt to manage science by creation of a czar and elite group that has control over a very large amount of money. There are no apparent provisions for resolving grievances, ethics questions, minority positions and other matters that affect scientific research and teaching. This is a slippery path for science in Louisiana. While it is not specifically a matter of local government, it has far reaching implications on program emphasis, project design and the wise use of funds and the future of research and education.

Yours truly,

David W Arceneaux

St. Bernard Parish Coastal Zone
Advisory Committee

SBPGDA 04: The LCA Study utilized numerous source materials, but was not restricted to only using individual parish management documents as a basis for planning. Also, a coastal zone management plan identifies compatible land uses and development patterns for coastal zones while an ecosystem restoration plan directs ecosystem restoration activities

SBPGDA 05: Please see General Response #4 regarding the coordination roles for agencies and local governments in the LCA Plan.

SBPGDA 06: Public funds both Federal and local for a wide range of necessary activities are in high demand. In this regard, the decision making process for Federal funds for water resources related activities has been prescribed to require a relative demonstration of the desired outputs, be they economic values in dollars or environmental units of output, versus the necessary funds. This allows for the most equitable comparison of all proposed actions requested, and a defense of decisions allocating those limited funds. Regardless, the plan formulation effort, which will continue through the completion of final decision and NEPA documents for approval of any additional authority and construction, USACE will seek to engage all effected parties, public and private, to ensure that all appropriate courses of action are given consideration.

SBPGDA 07: Please see General Response #2 regarding the S&T Program.

Letter 65: Mr. Craig Tafaro, St. Bernard Parish Council (SBPCCT)

St. Bernard Parish Council
8201 West Judge Perez Drive Chalmette, Louisiana 70043
(504) 278-4228 Fax (504) 278-4209
www.st-bernard.la.us

July 27, 2004

Mr. Tim Axtman
CEMVN-PM-C
P. O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on the Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study

Dear Mr. Axtman:

My name is Craig Taffaro. I am a member of the St. Bernard Parish Government Council and represent District D. I want to thank you for providing us the opportunity to comment on the Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study. These documents present components of a restoration program that is vital to the survival of both the land and people of this parish. We are particularly appreciative that this public hearing is being held in Chalmette. We also appreciate the diligent effort of those who worked on the study and prepared the documents.

SBPCCT 01

Concern about the loss of wetlands, environmental deterioration and storm surge threat related to the Mississippi River Gulf Outlet (MRGO) is ever present and has been a part of the way of life of several generations of St. Bernard citizens. Closure of the MRGO and restoration of its damages remains our number one issue. It is regretful that the draft LCA report does not address MRGO closure more directly and specifically. We trust that this deficiency will be remedied and will include a timetable for the closure and restoration process.

SBPCCT 02

We are also interested in the broader aspects of restoring the vitality and sustainability of the vast marshes, bays, reefs and barrier islands of our parish. The St. Bernard wetland-estuary is vital to the economy and culture of our parish as well as the ecology of the Gulf of Mexico. These vast renewable resource rich areas are truly a national treasure. We urge that the LCA team add more specifics to the draft report regarding how restoration and sustainability will be achieved.

SBPCCT 03

The St. Bernard Parish Government is concerned about effective participation in this program, which has the potential for remolding the region for the future. The pathways for decision making in all stages of the process, including planning, construction, operation, maintenance and monitoring of projects, as

SBPCCT 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

SBPCCT 02: Discussion on the "how restoration and sustainability will be achieved" is included in Section 4 of the Main Report. Specifically, the S&T Program component of the LCA Plan, including its adaptive management elements, would support measuring the success of restoration features following construction. A detailed discussion of the S&T Program is included in Appendix A. Please also see General Response #1 regarding the proposed MRGO Restoration Feature. The plan will be updated under future LCA authorizations, and these updates may include addition of restoration features that meet critical needs for ecological restoration.

SBPCCT 03: Please see General Response #4 regarding the coordination roles for agencies and local governments in the LCA Study.

Letter 65: Mr. Craig Tafaro, St. Bernard Parish Council (SBPCCT)

Mr. Axtman
July 27, 2004
Page 2

SBPCCT 03 (Continued)

presented in the study report and EIS document seem to relegate Parish Governments to a minor role. St. Bernard Parish wants to have an active role and a voice in the decision making process. This pathway should be clearly defined in the program documents. The administrative process should also include provisions for arbitration of issues and resolution of disputes.

SBPCCT 04

The people of St. Bernard have suffered losses as a result of environmental damages and changes. While we will be grateful for the relief that the coastal restoration program promises, we hope that some of the economic benefits of the program will also benefit the people who live in the area. This can be accomplished by advance identification of job opportunities which will result from the program so that our schools and economic development office can prepare the work force and local businesses to meet the challenge.

We remain supportive of the objectives of the LCA plan and our comments are intended as constructive criticism. Written comments will also be submitted.

Sincerely yours,

Craig Taffaro
Councilman, District D

SBPCCT 04: Comment noted.

Letter 66: Mr. Gatien Livaudais, St. Bernard Wetlands Foundation Inc. (SBWF)

St. Bernard Wetlands Foundation, Inc.
Post Office Box 1694
Meraux, Louisiana 70075

August 2, 2004

Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on the Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study

Dear Mr. Axtman,

Please accept these written comments which I expressed to you at the meeting in Chalmette, Louisiana.

My name is Gatien Livaudais. This presentation is on behalf of the St. Bernard Wetlands Foundation, a non-profit organization founded in 1992 and has a membership of approximately two hundred individuals and organizations. As the name implies, our organization is dedicated to preservation, protection, conservation and restoration of the wetlands and has the same basic objectives as the joint Federal-State program. In addition, we are particularly interested in the people of St. Bernard Parish, their heritage and cultural links to the bountiful wetlands.

We thank you for providing this opportunity in Chalmette to comment on the Louisiana Coastal Area (LCA) Ecosystem Restoration Study Report and Draft Environmental Impact Study. We thank the Corps of Engineers and the other Federal and State agencies for the work which went into the study.

SBWF 01

We share the concern of all citizens of this parish and the Louisiana coastal region for the catastrophic loss of land and deterioration of the wetlands that has occurred during the past fifty years. In our parish, the effects of the Mississippi River Gulf Outlet (MRGO) have been particularly damaging. The MRGO must be closed and appropriate mitigation undertaken to at least partially restore some of the damage. This objective should be more clearly spelled out in the final documents.

Our concern extends to the deteriorated conditions of all the wetlands, barrier islands and related features of St. Bernard. Because our cultural heritage is so interwoven into the fabric of the wetland landscape and its bounty of fish and wildlife, it follows that as we lose the wetlands we lose our heritage. The final document should include provisions for conservation and enhancement of the great Biloxi, St. Bernard and other marshlands and management approaches

SBWF 02

SBWF 01: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

SBWF 02: Please see response to SBPCCT#02.

Letter 66: Mr. Gatien Livaudais, St. Bernard Wetlands Foundation Inc. (SBWF)

Mr. Tim Axtman
August 2, 2004
Page 2

that will contribute to their sustainability. We do not find such provisions clearly stated in t draft report. SBWF 02 (Continued)

SBWF 03 While there is some discussion of cultural resources in the Draft EIS, the approach to conservation and management of these irreplaceable treasures is passive and not proactive. cultural resources component of the restoration plan should be strengthened.

We are also interested in the science and technology component of the program. We believe that the structure and administration of this program needs further public discussion and input. Science managed by government czars and panels is a double-edged sword and must include very stringent measures to prevent abuse. SBWF 04

Our comments are meant as constructive criticism and we hope that they will contribute to refining the review documents.

SBWF 05 As a final and personal comment, I believe that spending one hundred million dollars for more studies is wasteful and ludicrous. It is time to start "moving mud".

Sincerely yours,

Gatien Livaudais
St. Bernard Wetlands Foundation, Inc.

SBWF 03: Comment noted. Specific requirements for addressing cultural resources, on a feature-by-feature basis, are a required element of the final design and NEPA compliance documents that must be completed prior to initiating construction.

SBWF 04: Comment noted. The foundation of an S&T Program is intended to ensure that individual project features are coordinated to achieve the overall goals and objectives of the LCA Plan. Additionally, the S&T Program will ensure that restoration is carried out on the best available science. This includes answering key uncertainties to ensure that restoration efforts have the highest likelihood of success. The S&T program will include a multiagency membership including federal and state agencies, tribal governments, and local government representatives. This multiagency voice will ensure that work carried out through the S&T Program will benefit the LCA Plan as a whole. In addition, please see General Response #2 regarding the S&T Program.

SBWF 05: Please see General Response #8 regarding project implementation protocols and the need for immediate action.

Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)

1

William P. Klein Jr.
CEMVN-PM-RS
P.O. Box 60267
New Orleans, Louisiana
70160-0267

Louisiana Coastal Area (LCA) Near Term Ecosystem Restoration Plan
Programmatic Environmental impact Statement
Public Scoping Phase
July 2004

Dear Mr. Klein,

Comments from:
The Terrebonne Coastal Zone Management and Restoration Advisory Committee
August 19th 2004 Section 1 pages 1-2-3-4

The CZM&RAC committee serves as the permitting authority in Terrebonne Parish's coastal zone and is an advisory committee on coastal restoration to the Terrebonne Parish Consolidated Government. We express our thanks to you on your sincere effort in soliciting public input and holding public hearings.

TCZM 01

We believe the LCA Near Term proposal is a good start, but it does not include any significant projects for Terrebonne Parish in the first phase of implementation. We believe our original list, which is attached to this letter, must be considered in order to save Terrebonne's protective and productive marshes and wetlands.

TCZM 02

We must stop erosion and we must prioritize the building of the locks on the Houma Navigation Canal in order to save lives, valuable infrastructure, interstate commerce, protect our drinking water supply and seafood production. It is our belief that the HNC lock meets the criteria set forth by the Corps for selection of projects for programmatic authorization in the near term. Of course, we appreciate the fact that several projects in Terrebonne Parish have been tentatively selected for programmatic authorization in the Demonstration Project category.

TCZM 03

We are also encouraged to see that the reintroduction of fresh water into Bayou Lafourche has been selected for programmatic authorization in the near-term. This project is critical to our effort to reintroduce fresh water into Bayou Terrebonne. Prior to 1900, Bayou Terrebonne received flows from Bayou Lafourche at Thibodaux. Terrebonne Parish hereby requests that the scope of the approved Bayou Lafourche Project be expanded to include a component for Bayou Terrebonne fresh water reintroduction.

We believe that the most critical natural and ecological needs are to stop the State's annual loss of approximately 25 square miles of coastal wetlands per year. **Approximately 60% of this tremendous loss is located in Sub-provinces 2 and 3.**

TCZM 01: As outlined in Section 3 of the Main Report, the list of originally considered restoration features was subjected to a selection process to attain the final 15 features that were selected for the LCA Study. Several projects from Terrebonne Parish in Subprovince 3 were included in the LCA Plan as near-term critical restoration features (multipurpose operation of the Houma Navigation Canal Lock, Terrebonne Basin barrier shoreline restoration-Isles Dernieres and East Timbalier, maintain land bridge between Caillou Lake and the Gulf of Mexico, and Convey Atchafalaya River water to northern Terrebonne marshes); long-term, large-scale restoration concepts (Third Delta Study, Upper Atchafalaya Basin study including alternative operation of the Old River Control Structure, and Acadiana Bay Estuarine Restoration Study); and demonstration projects (land bridge restoration using long-distance conveyance of sediments, pipeline canal restoration using different methods, and Barrier Island restoration using offshore sources of sediments).

TCZM 02: As noted in response to TCZM 01, the selection of LCA Plan project components was a detailed and rigorous process. A near-term critical restoration feature recommended for congressional authorization is the multi-purpose operation of the Houma Navigation Canal (HNC) Lock. Design and engineering have been completed for the construction of the HNC Lock as part of the Morganza to Gulf Hurricane Protection Project, which may be authorized by Congress under WRDA or another authorization mechanism. The restoration feature included in the LCA Plan is to adapt operation of the lock for multiple uses, included salinity control and water flow control. These operations would be in addition to the use of the structure for hurricane protection, which is already being developed to protect inhabited areas and economic resources.

TCZM 03: Comment noted. The completion of decision and NEPA documents will be required prior to final construction approval of this feature.

Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)

2

Unfortunately, the only natural process that remains for Terrebonne Parish is subsidence and sea level rise; we no longer have replenishment of silt and nutrients from the mighty Mississippi and Atchafalaya Rivers. These factors contribute to the submergence of our valuable and protective marshes and wetlands.

TCZM 04

Our area has very little influence from delta formation from the main river flows because the Mississippi and Atchafalaya were leveed and the natural flows that built the Terrebonne – Barataria Basin no longer exists. **We need major diversions, but we all know that the best way to rebuild our wetlands and marshes is with dredging, and pipeline transport which will carry the needed silt and nutrients directly to our eroding landmass.**

The erosion caused by the lack of renewable silt and nutrients has brought us to the very brink of a great disaster, not only for Terrebonne, but on a national economic and energy security level as well.

We also know as a fact that the rivers are no longer carrying the silt load they once did. We know for diversion to work they will have to be very large and then we may have too much freshwater being dumped into an area, which could cause many other problems, in fact numerous problems.

Terrebonne Parish is a major producer of oil and gas and has a great number of oil and gas transport pipelines, which aids Louisiana in producing 25 to 30% of our nation's energy. Our lives, homes, infrastructure, seafood, oil and gas installations, and ecology are all being put in great dangers from storms and tidal surges.

TCZM 05

We must remember this LCA proposal talks about $1.9 billion being allocated to halt erosion. This money has not been allocated and will not be allocated until possibly 2008 without guarantee. **Time is not our friend and this is not enough money to do the job needed to save an irreplaceable resource!**

TCZM 06

We need to **rebuild the barrier islands** with sustainable material, harden and reinforce the north shoreline of all the lakes and bays and reduce the salt-water prism that is eroding our valuable protective marshes. These projects would have a positive impact by keeping tidal surges from severely damaging the marsh and will reduce the severity of tidal surges from small storms. We believe these projects will help **protect** Pointe Aux Chenes, lower Montegut, and parts of Dulac and will also have a positive impact on the whole basin. We also believe barrier island restoration will help save Highways 55, 56 and parts of 57 and will probably protect our main drainage pumping stations. In order to help our proposed Morganza to the Gulf Hurricane Protection levees, we must have silt and fresh water from the Atchafalaya River diverted into Terrebonne's fragile marshes. We envision that the silt will build up the marshes to keep them healthy, and serve as the first line of defense against wave action, which can adversely effect the integrity of the levee system. All projects must work in concert to stop erosion and start the rebuilding process of our productive estuarine area.

TCZM 07

Our needs are great and **we advocate projects,** like those described herein, which will meet our entire human, ecological and economic needs at the same time. **We insist that**

TCZM 03 (Continued): A principal purpose of these documents will be to lay out and compare possible alternative actions, which could include the modification suggested. A second option could be the future addition of such a modification under adaptive management of the LCA Plan.

TCZM 04: Comments noted.

TCZM 05: Comment noted.

TCZM 06: The LCA Plan includes the restoration features "convey Atchafalaya River water to northern Terrebonne marshes" and "Terrebonne Basin barrier shoreline restoration-East Timbalier and Isle Dernieres" as a near-term critical restoration features for Congressional authorization. These features will enhance existing Atchafalaya River influence to Lake Boudreaux and Grand Bayou via the GIWW and restore the Timbalier and Isles Dernieres barrier island chains. Section 2 of the FPEIS provides additional detail for these restoration features. Additionally, there are demonstration projects included in the LCA Plan to investigate marsh restoration and/or creation using saline sediments and barrier island restoration using offshore sources of sediments. The implementation of the LCA Plan will help reduce the amount of nutrients entering the gulf, thus contributing to the reduction of the gulf hypoxia. Section 2 of the FPEIS provides more detailed information.

TCZM 07: See response to TCZM 01.

Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)

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TCZM 07 (Continued)

our area must be included in projects that will attain the "no net wetland loss" criteria within the Terrebonne Basin. Our problems are complex and will be expensive to remedy, but we insist that land lost in our area be rebuilt in the area of loss. In our opinion, we should not only look to build land where it is cheap and convenient. We must consider rebuilding land where the people are living! **We need projects that will offer long term help in our area, to protect our people and our infrastructure.**

Terrebonne has many significant resources that must be considered.

TCZM 08

We need to strive to correct the **"dead zone" phenomenon** that at times can migrate into our lakes and bays. This is currently impacting a significant area of the Gulf of Mexico and we don't believe scientists and agencies are fully aware of its total negative impact on our very valuable fisheries.

TCZM 09

The barrier islands are our first lines of defense when storms or hurricanes threaten our lives and infrastructure. The islands are well documented in their beneficial effect in the production of our seafood and serving as bird nesting habitat. These islands also protect our inshore oil and gas installations and the many pipeline that cross the interior bays. They are used as safe harbor by boat captains in small crafts to protect them from wave action brought about by sudden storms. We must take all possible steps to **save** what is there and **rebuild** what needs to be reinforced with any material necessary. The islands are important for the recreational resources such as fishing and camping that they provide. Fish such as speckle trout, redfish, flounder, blackdrum and many other species are attracted to these landmasses and surrounding shallow waters. The islands are rich in bird life and serve as great bird rookeries. In essence, the **Barrier Islands off Terrebonne Parish's coast are an integral part of Americas Wetlands.**

TCZM 10

The sand resources of Ship Shoal are very valuable, and may help us rebuild our Barrier Islands and adjacent marshes.

TCZM 11

We have to jointly develop strategies to implement diversions of nutrient-laden fresh water and to pump silt and nutrients through dedicated pipelines to where they will do the greatest good. We must look for opportunities to harden and reinforce the north shores of our lakes and bays. We must maintain the integrity of our barrier island complex and even look into building structures between the islands and the north shoreline. We have to take bold steps and let the **United States Government know** what is really needed to protect **our valuable shores** and how they **impact the whole United States.**

Again, we thank you for this opportunity to comment on projects, which are so important to the lives of over 100,000 people in our community.

TCZM 08: Gulf hypoxia is discussed in Section 3 of the DPEIS and Section 2 of the LCA Plan. Also see response to TCZM 06.

TCZM 09: Please see response to TCZM 06.

TCZM 10: The Main Report identifies Ship Shoal as a potential source of sediments for use in restoration efforts.

TCZM 11: Comments noted.

Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)

4

Sincerely,

Nolan J. Bergeron Jr.

Nolan J. Bergeron Jr. – Chairman

Ed Landgraf --Vice Chairman	Kirby Verret
Robert Barthel	Paul Yakupzack
Logan Babin, Jr.	Dr. Denise Reed
Wilson "Doc" Gaidry	James Miller- CZM Administrator
Carey "Buddy" Hebert	Becky M Cangelosi- Clerk

CC.

President George W. Bush	Terrebonne Parish Levee District
Congressman Billy Tauzin	E.P.A
Senator John Breaux	S.C.I.A
Senator Mary A Landrieu	T.P. Chamber of Commerce

Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)

5

LCA Near-Term Ecosystem plan
Ecosystem Restoration Study
July 2004

Comments Terrebonne Parish Coastal zone & Coastal restoration Advisory Committee
Section 2 page 4 & 5

We must **stop** the continuing **loss** of our **valuable wetlands and marshes**. We can accomplish this with the proper engineering and design. We must undertake this effort as a **national priority**. We must prioritize the needs and safety of our people, our total communities and work to correct the **environmental travesty** that has occurred in the Barataria-Terrebonne Basin over a period of the **last 50 years**. This tragic environmental travesty has allowed our **people's lives** to be put **in jeopardy** from even the smallest hurricane or tidal surge.

Time is not our friend, we must have help soon or we will lose a national treasure. The lost of this treasure can only be blamed on very poor foresight and lack of long term planning.

When the problem was recognized in the 60's our state and federal people had to dodging the problem.

This was caused because the **natural deltaic flows** of our **two great rivers were leveed**. We have **serious subsidence problems now.** Our valuable marshes and wetlands were **deprived of the nourishment of silt and nutrients**. We now need **major pipeline transport of silt laden freshwater and river diversions** in order to **rebuild the Barataria – Terrebonne Basin.** We can only **support** the **Near-Term plan** if **projects are built** in the areas **where loss of valuable marsh and wetlands occurred**. The term "**cost effective**" is **not encouraging** when the **scientific evidence documents the facts** as stated above. The only natural process the Barataria- Terrebonne basin have is subsidence and sea level rise and we have very little time on our side. **Help us!**

TCZM 12

TCZM 13

Restoration of our valuable and protective wetland, marshes and barrier islands will have to occur by **pipeline transport and diversions**. It is believed our area can be sustained by projects that mimic the **previously destroyed natural silt- carrying processes.**

The **restoration** of endangered or **critical geomorphic structures** in the Barataria – Terrebonne Basin is **technically feasible** by **pipeline transport** of slurry and **river reintroduction.** It is **ironic** that the Barataria –Terrebonne Basin's **natural deltaic processes** were **destroyed** when the **Mississippi and Atchafalaya** were **leveed** and the **interior marshes were allowed to deteriorate** while being **adjacent** to **two of America's greatest rivers.**

TCZM 14

TCZM 15

The **restoration** of our marshes, wetlands and islands **will protect our hundreds of thousands** of **people** and **our priceless infrastructures** in the Barataria- Terrebonne

TCZM 12: Comments noted. Many of the issues identified in the comment are being addressed in near-term critical restoration features or by demonstration and/or long-term, large-scale restoration concepts in the LCA Plan.

TCZM 13: Comment noted.

TCZM 14: Please see General Response #9 regarding sediment transport via pipeline.

TCZM 15: Comments noted.

Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)

6

TCZM 15 Continued

Basin. This will also **save** our **industries, seafood production,** and the **ability** of all our **wildlife** to **survive** in this **productive area** that is **slowly washing into the sea** or just **sinking out of sight**.

It will be possible to **capitalize** on existing **infrastructures** and **activities**. The **public wants** to see the **restoration** of these **great wetlands**. They know their **lives**, their **living,** their **homes** and **way of life depend on it.**

The coast of Louisiana and the Barataria-Terrebonne basin is a jewel in the great America's Wetlands.

Nolan J. Bergeron Jr.------Chairman Terrebonne Parish CZM & CRA Committee

Nolan J Bergeron Jr.

Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)

7

Louisiana Coastal Area (LCA) near Term Ecosystem Restoration Plan
Programmatic Environmental Impact Statement
Public Scoping Phase July 2004

Comments from the Terrebonne Parish Coastal Zone and Restoration Advisory Committee

We know projects identified on this list will help save the " Good Earth " Terrebonne Parish from subsidence, sea-level rise and from salt water intrusion.

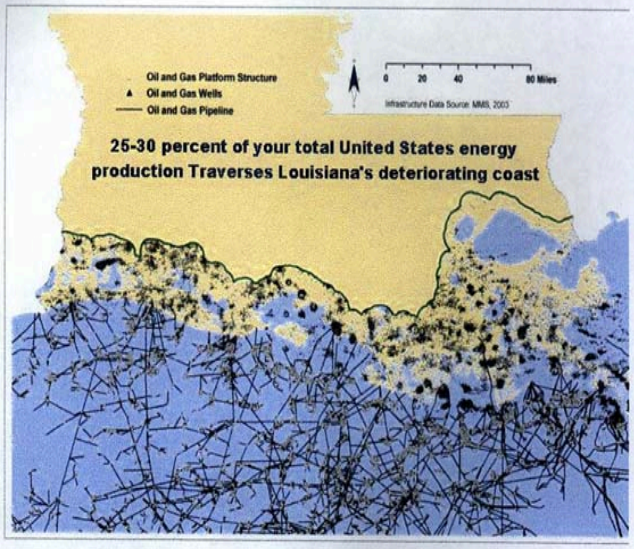
TCZM 17

1. **Implementation of the Penchant Basin management plan, including diversions from the Atchafalaya River and pipeline transport to the entire Penchant basin.**
2. **Fresh water introduction into the southwest Terrebonne wetlands via Blue Hammock Bayou.**
3. **Conveyance of the Atchafalaya River water to the northern Terrebonne Parish wetlands and western marshes.**
4. **Fresh water introduction into the Lake Decade and its southern reaches.**
5. **Continue the third delta studies.**
6. **Build and maintain the land bridges between the Gulf waters and Bayou Dularge and Grand Caillou.**
7. **Re-build and maintain the Timbalier land bridges.**
8. **Rehabilitate the northern shoreline of Terrebonne/Timbalier bay.**
9. **Stabilize the gulf shoreline at Point Au Fer Island**
10. **Barrier Island restoration must continue, this is our first line of defense.**
11. **Back fill pipeline canals and remove any levees that were built when these canals were dug.**
12. **We must use pipeline transport of silt and nutrients to save our coast.**

We must urgently move to start large meaningful coastal restoration with every resource at our disposal before its to late.

TCZM 17: Comment noted.

Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)



Letter 67: Mr. Nolan J. Bergeron, Terrebonne Coastal Zone Management and Restoration Advisory Committee (TCZM)

Petition to the President and Congress of the United States of America

We need immediate help to save our lives, our property, and natural resources in coastal Louisiana

The Barataria – Terrebonne Estuary and the entire Coast of Louisiana is rich in culture and is the second largest producer of energy and seafood in our Nation, **The Great United States of America.** Our coast, marshes and estuaries are rich in wildlife, seafood, oil and gas and have supplied the needs of this wonderful country with a substantial amount of revenue and economic security. We are asking you, our ***President*** and ***all Members of Congress*** to please be cognizant of the enormous land loss problems that we are facing in our communities. Louisiana has lost over 1900 sq. miles of coastland to the Gulf of Mexico, and continues to lose 24 square miles each year. This is a ***threat*** to our people, oil and gas industry, seafood industry, property, lifestyle and ***Everyone's*** national security and economy.

We know that the majority of the erosion problems were caused when levees were constructed many years ago, along the two greatest rivers in Louisiana. This fact combined with natural subsidence, dredging of canals, great losses of our Barrier Islands, and other components have instigated the elimination of silt, fresh water and nutrients that are needed to sustain South Louisiana's great wetland, causing additional salt-water intrusion and erosion. This has left our coast, culture, population, and infrastructure at great risk from the encroaching Gulf of Mexico, Flooding, Storm Surge, and Hurricanes. We need the reintroduction of silt carrying flows and other initiatives to rehabilitate and protect our valuable marshes, wetlands, and coastline.

We now plead for your total commitment to dedicate the necessary resources to solve the problems of the loss of this abundant ecological, economic and cultural resource, ***the Barataria- Terrebonne Basin and the entire coast of Louisiana.*** Please help us save this great resource for the people of the ***United States of America.***

By signing this document, we plead with you to help preserve and restore ***America's Greatest Wetlands - The Barataria-Terrebonne Basin and the entire Coast of Louisiana.***

Name	Address	Telephone #
We have over 40,000 signatures and we will continue until we reach our goal of 40,000. I hope this will further help to get the funding needed to rebuild our coast.		

Letter 68: Mr. Jerome Zeringue, Terrebonne Levee and Conservation District (TLCD)

TERREBONNE LEVEE
& CONSERVATION DISTRICT

August 23, 2004

U.S. Army Corps of Engineers
Attention: Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Subject: **Louisiana Coastal Area (LCD) Ecosystem Restoration Study**

Dear Mr. Axtman:

The Terrebonne Levee & Conservation District (TLCD) is pleased to offer the following comments regarding the Louisiana Coastal Area Study. The TLCD is in full support of measures to reduce coastal erosion and its impacts on the coastal communities of Louisiana.

TLCD 01 The U.S. Army Corps of Engineers, Louisiana Department of Transportation and Development and TLCD will construct the Morganza to the Gulf Hurricane Protection Project. Any and all coastal restoration measures can have a beneficial impact by reducing the anticipated maintenance of these flood protection structures over the next 50 years. Any restoration measures which result in the preservation of coastal marshes in Terrebonne and Lafourche Parishes will benefit this project.

Additionally, the plan calls for multi-purpose operation of the Houma Navigation Canal Lock. The TLCD fully supports multi-purpose operation of the Houma Navigation Canal Lock so long as it is operated to protect residents and property from tropical storms and hurricanes. TLCD 02

Additionally, the TLCD supports this principle with the understanding that the operation and maintenance cost of this structure will be the responsibility of the federal government. The TLCD is working to insure that this responsibility is accepted by the federal government.

TLCD 03 Multi-purpose operation of the Houma Navigation Canal Lock in sub-province 3 and a new lock in the GIWW in sub-province 4 could potentially negatively impact navigation. The multi-purpose use of the Houma Navigation Canal Lock will significantly increase the frequency of its operation over its intended use as a hurricane protection structure. Likewise, the operation and maintenance cost of the lock will increase significantly. The local sponsor of the Morganza to the Gulf Hurricane Protection Project, that includes the Houma Navigation Lock, must be compensated for the increased O&M cost associated with the continual operation of the locks facilities for coastal restoration purposes provided this is not a federal function.

The Study recognizes the on-going Morganza to the Gulf Hurricane Protection Project in sub-province 3. This project is critical in the protection of human life, property, and oil and gas infrastructure in Terrebonne and Lafourche parishes. Coordination of the project features of both the Morganza to the Gulf and the LCA is necessary for the residents of the Terrebonne basin to sustain their communities. TLCD 04

Sincerely,

TERREBONNE LEVEE AND CONSERVATION DISTRICT

Jerome Zeringue
Executive Director

5600 HIGHWAY 56 · CHAUVIN, LA 70344 · (985) 594-4104 · FAX: (985) 594-9255

TLCD 01: Comment noted.

TLCD 02: Assessment of impacts to hurricane and flood protection efforts would be completed prior to change in operation and maintenance of the structure for additional purposes. Under existing authorizations and cost-sharing agreements, operations and maintenance of this structure is the responsibility of the non-federal sponsors. Any increase in operation and maintenance costs incurred as a result of multi purpose operation of the structure for environmental restoration would be the responsibility of the non-Federal restoration sponsor.

TLCD 03: Please see response to TCLD #02.

TLCD 04: Comment noted.

Letter 69: Mr. Don Schwab, Terrebonne Parish President (TPPDS)

OFFICE OF THE PARISH PRESIDENT
TERREBONNE PARISH CONSOLIDATED GOVERNMENT
P.O. BOX 6097
HOUMA, LOUISIANA 70361

Don Schwab
PARISH PRESIDENT

(985) 873-6401
FAX: (985) 873-6409

August 20, 2004

William P. Klein, Jr.
CEMVN-PM-RS
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Klein:

TPPDS 01

I am in full support of the comments from the Terrebonne Coastal Zone Management and Restoration Advisory Committee.

I am also very disappointed that the LCA Near Term proposed does not include any significant projects for Terrebonne Parish in the first phase of implementation.

With a population of over 100,000 people and forty percent of that population living south of the Intracoastal Canal, we need help now.

Terrebonne Parish would appreciate any additional help we can receive.

Sincerely,

Don Schwab
Terrebonne Parish President

TPPDS 01: As outlined in Section 3 of the LCA Main Report, the list of originally considered project features was subjected to a rigorous selection process to attain the final 15 projects that were selected for the LCA Plan. Throughout plan formulation, projects were eliminated based on their applicability to restoration approaches, ability to be implemented within five to ten years, associated uncertainties, and ability to meet critical needs criteria. Several projects from Subprovince 3 were included in the LCA Plan and will be implemented through both programmatic and standard authorization processes.

Letter 70: Mr. Keith Ouchley, The Nature Conservancy (TNC)

The Nature Conservancy®
OF LOUISIANA
Saving the Last Great Places

P.O. Box 4125
Baton Rouge, Louisiana 70821
TEL 225 338-1040
FAX 225 338-0103
www.louisiananature.org

International Headquarters
Arlington, Virginia
TEL 703 841-5300

August 22, 2004

Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Comments on Draft LCA Study Report

Dear Mr. Axtman;

Thank you for the opportunity to comment on the near term Louisiana Coastal Area (LCA) assessment. The Nature Conservancy (the Conservancy) commends the Army Corps of Engineers (Corps) for successfully completing such a difficult undertaking in a short time frame and for producing a useful document that begins to spell out a plan for solving the complexities of coastal restoration in Louisiana.

The Conservancy is firmly committed to assisting the Corps and others involved in coastal restoration in Louisiana in whatever way is appropriate and that meets our goals of achieving conservation of biodiversity. Indeed, the Conservancy has been conserving important habitats in Louisiana since 1989 and nationally since 1951. Currently, the Conservancy is working hand in hand with public and private partners in Louisiana to protect and restore a variety of coastal habitats such as the prairie/marsh complex at White Lake; the marshes, swamps, and seagrass beds of the Lake Pontchartrain basin; the barrier island forests of Grand Isle and; the swamps and bottomland hardwood forests of the Atchafalaya Basin.

Coastal Louisiana is a resource with global biodiversity significance. It is home to an extraordinary number and diversity of plant and animal species and natural habitats including seventy-nine that are rare, threatened or endangered, with over 20 of those considered globally rare. The coast provides important habitat for various life-cycle phases of a variety of species that are Federally-listed such as the gulf sturgeon, Kemp's Ridley sea turtle, loggerhead sea turtle, diamondback terrapin, Brown Pelican, Piping Plover, Bald Eagle, and Louisiana black bear. Louisiana's coast supports the Gulf of Mexico's largest population of loggerhead sea turtles and the only significant population of diamondback terrapin in the world.

Globally significant numbers of many species are supported by Louisiana's coastal wetlands. Twenty-five percent of the world's population of Piping Plover winter on

recycled paper

Letter 70: Mr. Keith Ouchley, The Nature Conservancy (TNC)

Louisiana's barrier islands. The Louisiana coast supports 75% of Mississippi and Central Flyways wintering waterfowl or approximately five million ducks and geese annually. Millions of neotropical migrant songbirds pass over coastal Louisiana and rely on coastal woodlands during inclement weather. The Louisiana coast houses the nation's largest concentration of colonial nesting wading birds and sea birds (approximately 200 colonies and over 300,000 nesting pairs), including the largest known nesting colonies of many species and five of the nation's largest colonies. The quality of Louisiana wetlands is exemplified by the fact that mean wading bird colony size is two to three times the national average. Of special significance, over 50% of the nation's nesting population of several species, including Forester's Tern, Great Blue Heron, Snowy Egret, Little Blue Heron, Tricolored Heron can be found here.

It is from an appreciation of coastal Louisiana's contribution to the world's biodiversity, and the Conservancy's commitment to conservation of that biodiversity, that the Conservancy offers the following comments on the Corps' LCA plan.

Science-based Decision Making and Adaptive Management

TNC 01

The Conservancy is pleased that the LCA plan acknowledges the importance of decision-making based on sound science as evidenced through the creation of a robust Science and Technology Program. What is less clear in the plan is the relationship of the various committees and boards within that program to each other and most importantly the Program Management and Implementation Teams. The Conservancy strongly recommends that an independent board(s) – not housed within the Corps or the State – must be established to guide decision-making about the restoration program in general and restoration activities specifically. Implicit in this recommendation is the notion that decisions at every level and scale must adhere to principles of Adaptive Management and that the best objective thinkers available should be ***actively*** involved in restoring Louisiana's coast. Importantly, even though this near term plan prioritizes restoration activities only over the first ten years, these decisions must be made in the context of a truly comprehensive, multi-decade effort. This should hold true for the next set of projects and so on. **The plan must be clear about the *process* for prioritizing restoration projects themselves – based on the goal of comprehensive ecosystem restoration – and be open to shifting priorities as research and monitoring bring better understanding of ecosystem response and the efficacies and failures of various restoration techniques.** Additionally, demonstration projects coming on line should address critical questions that can move the entire effort forward and well into the future. This is not well addressed in the plan. As the Corps develops the Comprehensive Plan, it must give more attention to fleshing out the ***process*** for choosing these priority restoration and demonstration projects based on their contribution to the comprehensive restoration of the coast.

TNC 02

TNC 03

Goal Setting and Biodiversity

The coastal habitats of Louisiana are varied and in some instances unique only to Louisiana. Louisiana's coastal habitats include marine and estuarine open water, seagrass beds, oyster reefs, barrier islands (forest and non-forested), emergent marsh (various associations form salt to fresh), forested wetlands (e.g., cypress-tupelo swamp,

TNC 01: Please see General Response #2 regarding the S&T Program.

TNC 02: The current recommendation for the composition of the S&T Office includes provisions for independent review in all levels of development of the plan, including implementation and S&T Office activities. Individuals not employed by any portion of the LCA Plan program structure will conduct these reviews. It is also recommended and envisioned that the S&T Office will be housed in an appropriate academic environment outside of either the state or Federal government agencies. The location has not yet been decided.

Adaptive management is the keystone for success of the LCA Plan. The USACE agrees that decisions should be made with full use of information developed at all levels of the teams in the adaptive management process. In order for this process to work, a long-term view of restoration is required that is dependent on good monitoring and continued development of best practices that have been developed through efforts such as demonstration projects. The USACE is prepared to adjust the plan in accordance with Adaptive Management processes that may require shifts in priorities and strategies. In fact, the USACE has incorporated periodic reporting throughout the chain of command, including Congress, to facilitate this potential. The USACE also endeavors to favor native species in the execution of the plan and have incorporated that idea into the guiding principles of the planning process. The USACE also recognizes that a successful management of this important project will require a dynamic and evolving management plan. For that reason, the USACE intends to continue to develop this plan of implementation throughout the programs life.

TNC 03: The identification and development of demonstration projects to resolve various scientific and technical uncertainties is intended to be a major duty of the S&T Office.

Letter 70: Mr. Keith Ouchley, The Nature Conservancy (TNC)

bottomland hardwood forest), natural levee live oak forests, salt domes, and cheniers. Historically, these habitats existed in a mosaic pattern across the landscape. These habitats relate to each other functionally and structurally and it is critical that all habitats be present on a restored landscape. As an example, a healthy barrier island system is the best defense against inland marsh loss. Many species, both commercial and non-commercial, require several habitats throughout their life cycle – gulf sturgeon, for example, require intact coastal rivers for spawning, seagrass beds during their juvenile years and open water as adults.

TNC 04

Achieving an appropriate balance of these restored habitats and their associated species, and developing a monitoring program to track progress, must be a goal of the restoration program. Identification of indicator species, whose population and distribution are representative of the abundance and diversity of ecosystem-dependent aquatic and terrestrial species, must be one of the outcomes measured in any ecosystem-based restoration project. Further, more systemic parameters should also be developed to assess the cumulative contribution of individual projects toward the ultimate objective of achieving a sustainable, biologically-diverse coastal ecosystem. **The Conservancy strongly recommends that the Corps consider restoration of native biodiversity as a high priority objective in its ecosystem restoration program.** The extent to which native biodiversity restoration will be achieved through the LCA program is not well described.

Consistency and Coordination

TNC 05

The LCA Plan describes the need to coordinate agency activities and policies to ensure successful implementation of LCA. The Conservancy echoes that belief and urges the Corps to aggressively address consistency issues in current Corps policies and programs. For example, there is considerable evidence pointing to saltwater intrusion from the Mississippi River Gulf Outlet (MRGO) as a major cause of significant and ongoing wetland loss throughout the Lake Pontchartrain Basin. In 2003, the Conservancy, in partnership with area academics, agency personnel, and the public, completed a detailed analysis of the Lake Pontchartrain Basin and saltwater intrusion was identified as a top threat to the biodiversity health of this system that must be addressed immediately. This view is supported in the LCA study itself and through a resolution of the Louisiana legislature as well as local governments. **We strongly urge the Corps of Engineers to reconsider the current LCA recommendation of riprapping the banks of MRGO as an ecosystem restoration feature. While there might be Operations and Maintenance purposes for the riprap, this will certainly not address the tremendous and ongoing impacts of saltwater intrusion into this system. The Conservancy suggests that this recommendation is not consistent with the Corps own Environmental Operating Principles and urges the Corps to consider deauthorization of the Mississippi River Gulf Outlet for its current purpose.**

TNC 06

Additionally, it is critical that the Corps increase its scrutiny of coastal wetland permitting activities. As an example, unsustainable harvest of cypress swamps in coastal Louisiana, should it be permitted, would seriously undermine the credibility of any intent to restore coastal Louisiana. **The Conservancy urges the Corps to require a detailed**

TNC 03 (Continued): Individual projects implemented under the LCA Program will be required to comply with applicable environmental compliance and permitting. Specific uncertainties identified in the sorting of near-term critical projects have been suggested as the initial demonstration needs since they represent obstacles to feature implementation that might otherwise be appropriate to address critical needs in the system. Once the S&T Office has been established, they will be tasked with setting guidelines for general identification of these projects and detailing the parameters of specific demonstration efforts to ensure that project results alleviate the relevant uncertainty.

TNC 04: It is outside the scope of the LCA Study to propose a detailed monitoring and assessment plan at this time. The S&T Program, once formed, will be responsible for establishing, in concert with the CWPPRA Coastwide Reference Monitoring System (CRMS) and a Barrier Island Coastwide Monitoring (BICM) program (see S&T Plan appendix), key monitoring stations to collect baseline data, and identifying key uncertainties on which to focus monitoring and assessment activities. As stated in Section 4 of the LCA Main Report, data collection as well as monitoring and assessment efforts will require collaboration and funding support from many Federal and state agencies, NGOs, and universities. In the FPEIS, Section 3 describes rare, unique and imperiled vegetative communities throughout the Louisiana coastal zone. The appropriate sections in the PEIS have been revised to more fully discuss project-induced impacts to biodiversity.

TNC 05: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

TNC 06: All factors related to regulated cypress harvesting, including regeneration, would be considered in an evaluation of the activity.

Letter 70: Mr. Keith Ouchley, The Nature Conservancy (TNC)

TNC 06 (Continued)

and thorough analysis of the hydrology of these systems, to determine the real potential of cypress regeneration, before issuing any permits. Additionally, it should be noted that one of the areas currently being considered for cypress harvest may well be within the footprint of the diversion for restoration of Maurepas Swamp as recommended in the LCA plan.

TNC 07

The Conservancy recognizes the success of the Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA) and commends the resource agencies for its successful implementation. It is our hope that, as the two programs move forward, there is unanimous support by all agencies that the rigor being proposed through the LCA study is applied to projects implemented through CWPPRA and that the lessons learned from CWPPRA be transferred to the LCA program. These programs should be seamless, working from the same comprehensive plan informed by rigorous monitoring and adaptive management, and supported through a robust Science and Technology program.

TNC 08

The Conservancy urges the Corps to consider ongoing planning efforts of other groups in formulating strategies for coastal restoration to include the Barataria Terrebonne National Estuary Program, the Lake Pontchartrain Basin Foundation and the Conservancy's own Ecoregional Planning. And, while the Conservancy commends the Corps decision to begin to look at the connections of the coast to the Atchafalya Basin, we urge the Corps to consider not only water discharge but also coupling ongoing restoration of the backswamps of the Atchafalaya Basin through the Mississippi River and Tributaries Authority with restoration of the coast. Indeed, these systems are inextricably connected through hydrology and biology. Restoration of the coast ultimately cannot ignore restoration of the backswamp system of the Basin.

TNC 09

The Conservancy also urges the Corps to expand its role as advocate for inter-agency coordination. It is widely recognized that there needs to be balance between restoration of the coast with economic development in its parishes. We urge the Corps to be a leader in developing infrastructure and economic development plans with local parishes, state government and other federal agencies at the table to ensure an integrated, balanced vision for prosperity while protecting and restoring the natural resource base that undergirds it.

In summary, the Conservancy appreciates the Corps leadership in producing a very useful document and a strong short-term strategy for implementation. It represents a tremendous amount of research, coordination, and public input. Our hope is that we all view this plan as an essential first step in a truly comprehensive effort to restore Louisiana's coastal habitats. Thank you for the opportunity to comment and The Nature Conservancy looks forward to a productive partnership with the Corps of Engineers in this important undertaking.

TNC 06 (Continued): It is outside the scope of this effort to revise current USACE permitting authorities and to acquire necessary easements and fee title to assure the projected project benefits. The approval of the proposed LCA Plan would provide a basis for environmental consistency for all subsequent water resources related activities in the study area. However, this would not, without acquisition of some real estate interest outside of specific project areas, in any way supercede valid existing rights of landowners and leaseholders under existing statues.

TNC 07: Please see General Response #6 regarding the relationship of CWPPRA and LCA.

TNC 08: Please see General Response #3 regarding the LCA Study Area. The management of the Atchafalaya Basin and its cypress and bottomland hardwood swamps is an area of significant interest, both in conjunction with and independent of coastal restoration. Activities in this system, however, are in fact merely management. The natural trend in the Atchafalaya Basin system would be toward agradation and in filling of portions of those swamps not isolated from riverine influence. The presence of the Old River Control Structure has dramatically reduced this trend. Future efforts to convey additional resources via the Atchafalaya River to support coastal restoration are likely to be accompanied by tradeoffs in the surrounding swamps.

TNC 09: Please see General Response #4 regarding the coordination roles for agencies and local governments in the LCA Study.

Letter 70: Mr. Keith Ouchley, The Nature Conservancy (TNC)

Sincerely,

Keith Ouchley

Keith Ouchley, Ph.D.
Executive Director

Copy:
Thomas F. Caver
Deputy Director of Civil Works, U.S. Army Corps of Engineers

Robert F. Vining
Chief, Programs Integration Division, Directorate of Civil Work

William R. Dawson
Chief, Policy and Policy Compliance, Directorate of Civil Works
Chief, Mississippi Valley Division Regional Integration Team

Letter 71: Mr. William J. Barbara and Dr. Allayne Pizzolato, Thibodaux Chamber of Commerce (TCC)

Thibodaux Chamber of Commerce

P. O. Box 467 • 318 East Bayou Road • Thibodaux, Louisiana 70302

RESOLUTION

WHEREAS, Wetlands, beaches and ridges are now being lost at 25 to 35 square miles per year, and;

WHEREAS, Louisiana has 30% of the nation's coastal wetlands, and is experiencing 90% of the total national wetlands' loss, and;

WHEREAS, Much of the area is transitioning into an open water marine environment, and;

WHEREAS, Surface water from Bayou Lafourche serves as the drinking supply for a population of 300,000, as well as a source of operations for industry, has been contaminated on several occasions by increased salinity at the raw water intake 45 miles inland, and;

WHEREAS, Re-introduction of the Mississippi River into Bayou Lafourche will allow us to maintain, an adequate supply of drinking water for a population of 300,000, possibly regain thousands of acres of wetlands, re-nourish our uninhabited barrier islands with quality offshore sand, and re-establish much of the tidal protection which has been lost, and;

WHEREAS, We feel that new authorizations along with financial support for completion of ongoing projects is vital, and so;

TCC 01

THEREFORE BE IT RESOLVED, by the Board of Directors of the Thibodaux Chamber of Commerce on this 12th day of July, 2004, that we support the efforts to Re-Introduce the Mississippi River into Bayou Lafourche, and urge that immediate action be taken.

William J. Barbera
Chairman of the Board

Dr. Allayne Pizzolatto
Secretary

Phone: (985) 446-1187 • Fax: (985) 446-1191 • E-mail: info@thibodauxchamber.com
Web Site: www.thibodauxchamber.com

TCC 01: Resolution is noted.

Letter 72: Mr. Richard Hartman, U.S. Department of Commerce, National Marine Fisheries Service, Southeast Regional Office (NMFS-FWS)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

July 19, 2004 F/SER44/BH:jk
225/389-0508

Mr. Russell C. Watson, Supervisor
Louisiana Field Office
U.S. Fish and Wildlife Service
646 Cajundome Blvd., Suite 400
Lafayette, Louisiana 70506

Dear Mr. Watson:

The National Marine Fisheries Service (NOAA Fisheries) has received the draft Fish and Wildlife Coordination Act Report (Report) titled "Near-Term Ecosystem Restoration Plan for the Louisiana Coastal Area" transmitted by your letter dated May 28, 2004. The Report discusses the potential impacts of implementing a near-term plan (NTP) designed to achieve system-wide sustainable restoration of Louisiana's coastal wetlands and develop better techniques for meeting the critical needs and advancing our understanding of the coastal ecosystem.

We have reviewed the Report and find it to be well written. However, we have the following comments regarding information provided within the Report.

EXISTING FISH AND WILDLIFE RESOURCES
Essential Fish Habitat

NMFS-FWS 01

Page 6, paragraph 3. The word "Plan" should be changed to "Plans" in the first sentence.

Some features of the NTP involve mining offshore sediments for the restoration of barrier islands and headlands (e.g., Barataria Basin Barrier Shoreline Restoration-Caminada Headland and Shell Island). As such, the following species should be added to the third sentence of this paragraph: red snapper, Spanish mackerel, and bluefish. Additionally, the wording "and highly migratory species managed by NOAA Fisheries (e.g., billfishes and sharks)" should be added at the end of the final sentence of the paragraph.

NMFS-FWS 02

We appreciate the opportunity to review and comment on this Report. If you wish to discuss our recommendations, please contact Bren Haase at (225) 389-0508.

Sincerely,

for Miles M. Croom
Assistant Regional Administrator
Habitat Conservation Division

c:
NOD, Planning Division - Constance
LDNR, CRD - Duffy
EPA, Dallas - McQuiddy
NRCS, Lafayette - Paul
SER4
Files

NMFS-FWS 01: Text has been revised accordingly in the Fish and Wildlife Coordination Act Report.

NMFS-FWS 02: Text has been revised accordingly in the Fish and Wildlife Coordination Act Report.

Letter 73: Mr. Richard Hartman, U.S. Department of Commerce, National Marine Fisheries Service, Southeast Regional Office (NMFS)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

July 29, 2004 F/SER44/RH:jk
225/389-0508

Mr. Tim Axtman
Environmental Planning and Compliance Branch
Planning, Programs, and Management Division
New Orleans District, U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Axtman:

The National Marine Fisheries Service (NOAA Fisheries) has received the Draft Main Report (Volume 1) and Programmatic Environmental Impact Statement (PEIS-Volume 2) titled "Louisiana Coastal Area (LCA), Louisiana; Ecosystem Restoration Study" transmitted by a letter from Mr. David F. Carney dated July 1, 2004. The PEIS evaluates the potential impacts associated with the implementation of a wide variety of wetland restoration activities proposed under the LCA Ecosystem Restoration Study. Projects to be implemented under the auspices of the LCA study range from diversions of Mississippi River water and sediment into wetlands and shallow water bottoms to rebuilding barrier islands. Studies of more complex issues, such as the "Third Delta project" also are proposed for funding and implementation in the LCA plan.

Staff of NOAA Fisheries have coordinated extensively with the New Orleans District (NOD) regarding the impacts of various plan components on resources of concern. In addition, staff of NOAA Fisheries were responsible for drafting the sections of the PEIS related to the impacts of the no-action and preferred alternatives on Essential Fish Habitat (EFH) and Fisheries Resources. Based on our review of the Draft Main Report and PEIS, NOAA Fisheries has the following general and specific comments:

General Comments

Draft Main Report

NMFS 01

NOAA Fisheries is generally supportive of the approach to the wetland restoration effort being proposed by the NOD. However, we are concerned that some barrier island restoration projects presently undergoing engineering and design activities funded under the auspices of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) are not included in the Tentatively Selected Plan (TSP). Engineering and design for these projects will be completed in the next 12 months and the authorization of construction under CWPPRA is unlikely given the funding limitations presently being experienced in that program. Because these projects are: 1) relatively high cost (greater than $20 million each) and unlikely to be funded under CWPPRA; 2) they will be

NMFS 01: While the many portions of the Barataria Basin shoreline are integral components for a comprehensive Barataria Basin Barrier Shoreline restoration, the restoration feature included in the LCA Plan focused on those parts of the barrier shoreline that were most threatened with loss (i.e., the most critical), and those reaches that did not already have some type of on-going restoration effort. The East/West Grand Terre Island (BA-30) project and the Pass Chaland to Grand Bayou Pass (BA-35) project were not included in the LCA Plan because they have already undergone preliminary engineering and design, and it appeared that the continued consideration and approval of these projects under the CWPPRA program would result in their most rapid implementation. All geomorphic components of the Barataria Basin barrier shoreline need some measure of restoration as part of a comprehensive solution for the area, and implementation of projects to achieve restoration in the Barataria Basin barrier shoreline, whether they were funded by CWPPRA or any other source, would compliment efforts undertaken by the LCA Program. Verbiage has been added to the LCA Plan project descriptions to clarify the critical nature of the entire chain and the rational for identification of the shoreline reaches to be addressed.

Letter 73: Mr. Richard Hartman, U.S. Department of Commerce, National Marine Fisheries Service, Southeast Regional Office (NMFS)

2

NMFS 01 (Continued)

ready to go to construction in the near term; 3) are consistent with other components of the LCA plan; and, 4) are critical to the integrity of Louisiana's coastline; NOAA Fisheries believes they should be incorporated into the TSP. Specifically those barrier island restoration projects which are presently undergoing engineering and design and which we believe should be incorporated as Near Term Restoration Features in the TSP are the East/West Grand Terre Island (BA-30) project and the Pass Chaland to Grand Bayou Pass (BA-35) project.

NMFS 02

NOAA Fisheries also questions the high priority given in the TSP to the inclusion of the Small Bayou Lafourche reintroduction project in the Near Term Plan. As presently envisioned, this project will divert no more than 1,000 cubic feet per second of river water into the head of Bayou Lafourche, more than 50 miles away from the wetlands expected to benefit from this effort. During the passage down Bayou Lafourche, much of the sediment and nutrients would be lost from the diverted water. Some of this water also may be diverted from Bayou Lafourche for industrial or drinking water purposes. Considering the high cost of the project and the uncertainty of benefits, we recommend the Small Bayou Lafourche reintroduction project be dropped from the Near Term Plan and replaced with a project that will provide more substantial benefits to wetlands in the eastern Terrebonne and western Barataria basins.

Specific Comments

DRAFT MAIN REPORT
SECTION 4 - PLAN IMPLEMENTATION
Section 4.1 - Evaluation of PBMO Implementation

NMFS 03

Page MR-151 to MR-153. Throughout this section of the document, it is indicated that the Project Delivery Team (PDT) was responsible for the sequencing and scheduling of the plan components. In reality, the PDT was not responsible for these actions, rather the Federal and Non-Federal sponsors alone prioritized the plan components and scheduled their implementation. We recommend this section be revised to indicate that the Federal and Non-Federal sponsors were responsible for the actions described in this section.

NMFS 04

Furthermore, there is an inadequate description of how the Plan that Best Meets the Objectives (PBMO) components were prioritized. Prioritization is an important step as it determines which projects would be implemented as funds become available. It is not clear how the sequencing rules and assumptions led to the finished prioritization. We recommend this section be revised to include a thorough description of the prioritization process, similar to that provided in the previous section on criteria.

DRAFT PEIS

CHAPTER 3: AFFECTED ENVIRONMENT
Section 3.12 Essential Fish Habitat

NMFS 02: Currently the features identified for authorization have a significant level of design development. In addition, NEPA (EIS) documentation development has already been initiated for these features. The initiation of NEPA compliance is an indication that a critical assessment of alternative actions, which would be a required product for completion of a feasibility-level decision document under the LCA Program, is in progress and being documented. The Bayou Lafourche Freshwater Reintroduction feature has a significant level of design development, including hydraulic modeling of flow in the existing channel. In addition, the NEPA (EIS) documentation development has already been initiated. Hydrologically, the key to addressing loss problems in the eastern Terrebonne Basin centers on the delivery of freshwater, sediments, and nutrients. The need to employ multiple features to provide these resources to achieve the necessary level of beneficial output is highly probable, and the LCA Plan reflects this in the composition of its critical features. The delivery of Mississippi River water through the Bayou Lafourche channel would be consistent with historic system hydrology and a logical initial step in implementing restoration plans in this area.

NMFS 03: The text has been revised to indicate that sequencing and scheduling of plan components were done by the Federal (USACE) and local sponsor (State of Louisiana).

NMFS 04: Additional clarification regarding the nonprioritization of the PBMO components has been included in the final report.

Letter 73: Mr. Richard Hartman, U.S. Department of Commerce, National Marine Fisheries Service, Southeast Regional Office (NMFS)

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NMFS 05 Table 3-4, Page PDEIS 3-49. The Gulf of Mexico Fishery Management Council has not designated EFH for gray snapper or lane snapper in Louisiana. As such, mention of those two species should be dropped from this table.

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES
Section 4.10 Fishery Resources
Section 4.10.2 Restoration Opportunities-Direct Impacts

NMFS 06 Page DPEIS 4-57, paragraph 3. It is suggested in this section of the document that direct impacts to fishery species would include entrapment behind structures or cofferdams during construction of project features. We believe this impact to be unlikely and recommend it be deleted from the document.

NMFS 07 Table 4-4, page PDEIS 4-58. Approximately half of this table is missing from the document. The entire table is enclosed and should be incorporated into the PDEIS. A digital copy of the table will be provided via electronic mail to Dr. Bill Klein to allow for ease of incorporation.

NMFS 08 Table 4-5, page PDEIS 4-62. Wording provided in this table does not exactly match that provided by staff of NOAA Fisheries. We recommend the table be replaced with that enclosed with this document for incorporation into the PDEIS. A digital copy of the table will be provided via electronic mail to Dr. Bill Klein to allow for ease of incorporation.

CHAPTER 5: PUBLIC INVOLVEMENT AND COORDINATION
Section 5.3 Coordination
5.3.1 Federal Agencies

NMFS 09 Page PDEIS 5-31, paragraph 4. The National Marine Fisheries Service is an agency of the Department of Commerce, not the Department of Interior as is indicated in this paragraph. This error should be rectified.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS
Section 7.1 Areas of Controversy and Unresolved Issues

NMFS 10 Page PDEIS 7-2, #10. This area of controversy pertains to the potential over-freshening of receiving basins caused by freshwater diversions. The second sentence has not been completed. We believe, at the very least, that the term "fisheries" should be added at the end of this unfinished sentence.

CHAPTER 8: DISTRIBUTION LIST AND OTHER

NMFS 11 List 8.2 and 8.3. Pages PDEIS 8-1 through 8-6. Cheryl Brodnax, Bren Haase, Joy Merino, and Lawrence Rozas are listed in this table variably as working for NOAA Fisheries or the National Marine Fisheries Service. All four people work for the same agency, legally known as the National Marine Fisheries Service and colloquially known as NOAA Fisheries. We recommend the document

NMFS 05: Text has been changed accordingly in the FPEIS.

NMFS 06: Text has been deleted from the FPEIS.

NMFS 07: The entirety of Table 4-4 has been included in the FPEIS.

NMFS 08: Table 4-5 has been revised to include verbiage from staff of NMFS.

NMFS 09: The text has been revised to reflect the National Marine Fisheries Service as an agency of the U.S. Department of Commerce.

NMFS 10: The word "fisheries" has been added to the incomplete sentence.

NMFS 11: Agency affiliation has been corrected to reflect NMFS for all individuals, as well as in relevant text through the FPEIS and Main Report. Spelling error has been corrected in the FPEIS.

Letter 73: Mr. Richard Hartman, U.S. Department of Commerce, National Marine Fisheries Service, Southeast Regional Office (NMFS)

NMFS 11 (Continued)

be revised to show the legal name for the agency (the National Marine Fisheries Service) for which each works. Additionally, the spelling for Lawrence Rozas' last name should be corrected.

We appreciate the opportunity to review and comment on the Draft Main Report and PEIS. If you have questions regarding our comments, please contact Richard Hartman at (225) 389-0508.

Sincerely,

Richard Hartman

for Miles M. Croom.
Assistant Regional Administrator
Habitat Conservation Division

Enclosures

c:
NOD - Bill Klein
FWS - Lafayette
EPA - Dallas
LA DNR - Duzinski
NRCS - Paul
F/SER4 - Dale
F/SER - Keys
F/SER43 - Ruebsamen
Files

Table 4-4. **Items of consideration in the impact analysis of restoration opportunities on fisheries resources.**

Past, Present & Future actions	Habitat restoration projects continue, economic interests increasing, restrictions on fishing and fishing gear continue or are increased, natural habitat declines (e.g., subsidence and sea level rise), and structural blockages to habitat are increased.
Essential Fish Habitat	Essential Fish Habitat (EFH) is defined as "those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity". Because impacts to EFH will impact fisheries species, alterations in EFH are listed below for each of the plans. In coastal Louisiana, EFH are the waters and substrates consisting of marine and estuarine (tidally-influenced) habitats (e.g., marsh); submerged aquatic vegetation; sand, mud and shell water bottoms, and water column. Coastal marsh loss is of particular concern in Louisiana, because the marshes are the most extensive in the nation and are believed to be largely responsible for the high production of estuarine-dependent species in the north-central Gulf of Mexico.
Freshwater Diversions (reintroductions)	Direct impacts to fisheries resulting from freshwater diversions include mortality due to burial or sudden salinity changes; injury or mortality due to increased turbidity (e.g., gill abrasion, clogging of feeding apparatus); modified behavior, and short-term displacement. Indirectly, fisheries may be displaced to offshore areas. Displacement is related to the timing and volume of freshwater input proposed. These projects prevent the loss of marsh, and generally improve conditions for SAV and other highly productive forms of EFH. As a result, project areas can maintain most of their current ability to support Council-managed species (such as white shrimp, brown shrimp, and red drum), as well as the estuarine-dependent species (such as spotted seatrout, gulf menhaden, striped mullet, and blue crab) that are preyed upon by other Council-managed species (such as mackerels, red drum, snappers, and groupers) and highly migratory species (such as billfish and sharks). Potential increases in submerged aquatics will increase the habitat required for juveniles to escape predation and therefore increase quality and habitat.
Dredging	These projects, or project components, would negatively impact benthic organisms and benthic feeders in the borrow and disposal areas. Sessile and slow-moving aquatic invertebrates would be disturbed by the dredge or buried by the dredged material. Dredging and disposal activities and the resultant increased turbidity would temporarily displace other fisheries, but these species are expected to return after dredging and disposal activities are completed. Impacts include smothering of non-mobile benthic organisms in dredged material depositiion sites and increased turbidity in waters near the construction sites.
Beneficial Use/ Sediment Delivery/Marsh Creation, Restoration, or Nourishment	The use of dredged sediment would convert open water habitat to wetlands providing a more diverse habitat. The conversion would increase foraging, breeding, spawning, and cover habitat for a greater variety of fisheries species than would occur with no action, and potentially increase the marsh/water interface. The increased marsh/water interface is a greater benefit than marsh acres alone (Rozas and Minello, 2110; Minello and Rozas 2002). Measures should be taken (i.e., creating tidal creeks and ponds) to maximize the fisheries productivity of the created marsh areas. Nutrients and detritus would be added to the food web, providing a benefit to local area fisheries. Fisheries access features and structure operation plans would be necessary to facilitate ingress and egress of various fisheries species to created wetlands within the proposed disposal areas. Short-term adverse impacts to fish would occur during the construction phase of these projects as a result of dredging activities (see dredging impacts).
Salinity/water control structures	If water control structures are designed and operated to maximize marine fishery migratory opportunities, while minimizing the worst salt water events, these projects can slow the loss of emergent marsh without severely impacting marine fishery productivity. However, care must be taken to ensure the structures do not create conditions that would adversely impact marsh habitats supportive of marine fishery resources. Additionally, operational plans should incorporate provisions to ensure the structures are open during appropriate times to allow drainage, facilitate freshwater inflow, and allow the maximum possible marine fishery ingress and egress. Without these provisions, these projects can significantly reduce the marine fishery productivity of the project area, even if the structures help maintain marsh habitats; the maintained habitats would not support production of marine fishery species, if the species do not have access to those critical nursery and foraging habitats.
Shoreline Protection/ Stabilization	Shoreline protection projects are likely to prevent the loss of marsh for protected areas. This helps maintain valuable fisheries habitat. Design of shoreline protection should incorporate low-sill openings, gaps, and/or allow historical channels to remain open for aquatic organism ingress and egress, and the adequate discharge of surface flow drainage.
Barrier Island Restoraion	Barrier islands protect coastal marshes from storm surges and provide unique back barrier and sand bottom habitats. Barrier island restoration that involves supratidal vegetative plantings and sand retention structures alone will not directly affect fisheries species. However, the long-term impact to fisheries would be beneficial by maintaining the valuable habitats that would otherwise convert to open water. Restoration on a larger scale involving dredging of sand resources for placement on and around existing islands would impact the benthic areas of both the borrow and disposal areas. Subsequent benefits would result from the increase in back barrier shallow water and sand bottoms, and the increased protection to coastal marshes.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
P.O. Box 26567 (MC-9)
Albuquerque, New Mexico 87125-6567

TAKE PRIDE IN AMERICA

August 23, 2004

ER 04/0500

Dr. William P. Klein, Jr.
Mr. Tim Axtman
U.S. Army Corps of Engineers
New Orleans District
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Sirs:

The U.S. Department of the Interior (Department) has reviewed the July 2004 Louisiana Coastal Area Ecosystem Restoration Study (LCA) Draft Programmatic Environmental Impact Statement (DPEIS) and Main Report. In this regard, the following comments are provided for your use as you prepare the final documents.

The LCA study was undertaken in response to the continuing deterioration and loss of Louisiana's vitally important coastal wetlands ecosystem; absent substantial efforts to address those losses, more than 500 square miles of that ecosystem are projected to be lost over the next 50 years. The Louisiana coastal ecosystem supports nationally significant fish and wildlife resources that include migratory birds, inter-jurisdictional fishes, threatened and endangered species, and 10 National Wildlife Refuges. Louisiana's coastal wetlands and associated barrier islands also provide other functional ecological values, such as storm-buffering, water quality improvement, and protection of socially and economically important infrastructure.

The Department has and will continue to support LCA development by participating in all levels of the evolving LCA management structure. We appreciate and commend the cooperative efforts of the Corps of Engineers and other involved Federal agencies; the State of Louisiana (Governor's Office, Louisiana Department of Natural Resources, and other involved State agencies); various academic institutions and personnel; and private groups and individuals who have worked together to address this nationally significant issue. The Department has also consistently supported the pioneering partnership embodied by the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force in their unique efforts to address the loss of coastal Louisiana and its wetlands. The Main Report and the DPEIS substantiate that the scope of the problem is so great and the solutions to it are so complex and expansive that the combined and closely coordinated efforts of both CWPPRA and the LCA will be required to successfully address it.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

In view of the consequences envisioned in the future without the LCA, the Department, with the attached suggestions and comments, strongly supports implementation of the proposed LCA near-term TSP as the next key step toward comprehensively and sustainably restoring Louisiana's coastal ecosystem.

Draft Programmatic Environmental Impact Statement

General Comments

DOI 01 The Draft Programmatic Environmental Impact Statement (DPEIS) is well-written, adequately describes the significant fish and wildlife resources in the project area, and discloses the anticipated programmatic-level impacts of the TSP on those resources. Because it is a programmatic document, the Department recognizes that individual project impacts must be further evaluated and disclosed in subsequent, project-specific National Environmental Policy Act of 1970 (NEPA) compliance documents that will "tier-off" from the PEIS. Future LCA features or impacts that do not tier from the final PEIS will necessarily require revision of that document for consistency with current NEPA guidance.

DOI 02 The Fish and Wildlife Service (FWS) has also reviewed the biological assessment (BA) presented in Appendix B1 of the DPEIS in accordance with provisions of the Endangered Species Act (ESA) of 1973. As noted in the specific comments pertaining to that BA, the FWS concurs with the Corps' programmatic determination that the TSP is not "likely to adversely affect" any of the currently listed threatened and endangered species or designated critical habitat, for which the FWS has consultative jurisdiction. Consultations such as this one, involving a Federal agency proposal to adopt or approve a management plan or strategy that would be used to guide the development and implementation of future projects, are termed "programmatic consultations." Several courts have ruled that the decision to adopt plans or strategies that guide the implementation of future individual actions, as well as each future individual action itself, must fulfill the requirements for consultation under Section 7 of the ESA. Accordingly, while potential impacts associated with the proposed Louisiana Coastal Area Ecosystem Restoration Study TSP have been addressed at the programmatic level, an additional Biological Assessment/Biological Evaluation should be prepared when individual projects tiered to that plan/PEIS may affect a Federally listed threatened or endangered species and/or adversely affect designated critical habitats.

Specific Comments

DOI 03 Page 1-15, Section 1.5.2.1.2, Loss Of Coastal Geomorphology - The first paragraph states that degradation of interior geomorphologic structures adversely affects the entire system. This paragraph should be expanded in the final PEIS to identify and define interior geomorphic structures, such as barrier inlands, interior bay islands, main land fringe, etc., briefly explain their functions, and describe the effects on interior marshes when those structures are lost.

DOI 04 Page 1-23, Section 1.5.2.1.9.2, Hurricane And Louisiana Barrier Shorelines/Islands - In citing the 1980-to-2002 loss of Shell Island, the text may inadvertently lead one to assume that all of that loss was due to storms. This text should be revised to indicate that those losses may also be attributable to other causes such as subsidence, interruption of deltaic processes, and disruption of the associated sand or sediment supply. The penultimate sentence may also cause confusion and should be corrected to read, "If coastal land loss and erosion of Louisiana's barrier

DOI 01: Comment noted. All subsequent LCA Plan related restoration features will be compliant with the NEPA, as well as any other statutory authorities, including laws, regulations, Executive Orders, policies, rules, and guidance.

DOI 02: The District would continue to work closely with those agencies with jurisdictional oversight (the USFWS and the NMFS) with regard to consultation requirements under Section 7 of the Endangered Species Act. The LCA planning team would aggressively work to avoid, minimize, rectify, reduce or eliminate the impact, or if unavoidable, compensate for the impact, in this order as specified in 40 CFR Part 1508.20. An additional Biological Assessment/Biological Evaluation would be prepared when individual projects tiered to the LCA Plan and FPEIS may affect a Federally listed threatened or endangered species and/or adversely affect designated critical habitats.

DOI 03: Additional discussion on the identification and definition of interior geomorphic structures has been included in the FPEIS. The following text has been added to the FPEIS:

"The geomorphic structure of the estuary is degraded. Barrier islands, distributary natural levees, and lake rims represent the majority of natural features above marsh elevation in the coastal area. As these features subside and/or erode, the rate at which other degenerative processes work is increased. These protective elements of the estuarine framework are critical to the stability of the system as a whole.

Barrier islands are an important element of the geomorphic framework of the estuary. Barrier islands separate the gulf from the back-barrier estuarine environment helping to maintain the salinity gradients important to estuarine species. As they erode and are breached, marine processes invade the interior bays and marshes and land loss accelerates. Barrier islands also serve as valuable storm buffers protecting communities, industry, and their associated infrastructure from storm surges.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 03 (Continued): Like barrier islands, distributary natural levees, and lake rims are critical geomorphic features. They protect interior wetlands from wave and current action reducing land loss and help to reduce tidal surge during storm events. They are also responsible for establishing much of the natural hydrology within the coastal system. These features have subsided and eroded to a point where there effectiveness is severely reduced. It is important to restore these geomorphic features so that the benefits they provide (storm surge reduction, hydrology control, erosion control, etc.) can be maximized.

DOI 04: Text has been revised accordingly with "For example, between 1980 and 2002, Shell Island, which protects a portion of the Barataria Basin, lost approximately 101.5 feet per year (Conner et. al. 2004) due to the effects of storm erosion, relative sea level rise, and a reduction in sediment supply and "If the erosion of Louisiana's barrier shoreline is not addressed, inland cities will become the front line of defense for a hurricanes high wind and storm surge."

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 04 (Continued)

shorelines is not halted, current inland cities may be directly exposed to hurricanes' high winds and storm surges."

DOI 05

Page 1-27, Section 1.5.2.2.6, Oil and Gas Infrastructure - This section duplicates information previously presented in Section 1.5.2.2.4 - Construction of Canals and Dredged Material Banks That Disrupt The Internal Hydrology of the Delta. In addition, a possible discrepancy between the estimated 9,500 miles of oil and gas pipelines referenced in Section 1.5.2.2.6, and the earlier estimate of 9,300 miles of canals for navigation, drainage, and oil and gas development referenced in Section 1.5.2.2.4, should be corrected in the final PEIS.

DOI 06

Page 1-43, Section 1.9, Prior Studies, Reports and Existing Water Resources Projects – The reference to attachment 2 at the end of the first paragraph is apparently in error; we could not find that attachment, although it may be similar to attachment 1 of the Main Report.

DOI 07

Page 2-40, Section 2.3.6.1.3, Subprovince 3 Feature Descriptions - The title for the third feature "Convey Atchafalaya River water to Terrebonne marshes . . . ." should be underlined and followed with a colon for consistency. The last sentence of that project description should also be corrected to read "This feature also includes increasing freshwater supply through repairing banks along the GIWW, enlarging constrictions in the GIWW, and diverting additional Atchafalaya River freshwater through the Avoca Island Levee (into the Bayou Chene/GIWW system).

DOI 08

Page 2-65, Section 2.5.2.2, Subprovince 3 Features and Opportunities Having Limited or No "Critical Needs Criteria" Value - The CWPPRA Wetland Value Assessment for the Blue Hammock Bayou Project determined that the project would benefit a 43,000-acre area and would yield a relatively high 600 average annual habitat units. Because of substantial project-related salinity reductions through riverine freshwater introduction, the project would potentially impact all the private oyster leases and the State oyster seedgrounds located within Lake Mechant. Hence, the statement that this project ". . . does not appear to produce significant enough changes . . ." conflicts with the previous CWPPRA evaluation. Therefore, this project should be removed from the list of projects that do not sufficiently meet ecological needs, and it should be added to the list of projects for which there is insufficient science and technology understanding. (This comment also applies to the Main Report, Page MR-140, first paragraph).

DOI 09

Page 2-81, Section 2.8.1.2, Assumptions and Rules and Table 2-14 Sequenced PBMO Components - We recommend that further explanation/clarification regarding why some composite groups were prioritized as a group, while other composite groups were separated into individual projects for sequencing, be provided in the final PEIS. That document should also include a description of how the sequencing rules were used to prioritize implementation of features, and the associated reasoning, like that provided in Section 2.5 which explains why features meet significant "Critical Needs Criteria" or not.

DOI 10

Page 2-82, Section 2.8.1.4, Implementation Scheduling Evaluation - The last paragraph states that the Penchant Basin Restoration Plan was not considered to be implementable within 10 years, yet that project is presently nearing completion of extensive hydrologic modeling evaluations and final design, preparatory to construction. The Small Bayou Lafourche Reintroduction project has also undergone considerable engineering work; however, the text on Page 2-102 indicates that, because ". . . significant design efforts are already underway," that project is recommended for programmatic authorization. We recommend that this apparent inconsistency be more fully explained in the final PEIS. The sequencing approach for projects

DOI 05: Duplicative language has been removed, and inconsistencies regarding estimated miles of oil and gas pipelines have been corrected.

DOI 06: The text has been revised to state that Attachment 2 of the Main Report lists prior studies, reports and existing water projects. Attachment 1 of the Main Report lists relevant authorizations for coastal restoration efforts.

DOI 07: Editorial corrections have been made to the FPEIS.

DOI 08: While technical information developed under the CWPPRA program is acknowledged as supportive of features being considered, whenever available, the use of outputs commonly developed through the LCA Plan effort dictated the identification of the most effective solutions. In this case, the LCA Plan analysis did, in fact, identify the Blue Hammock Bayou feature as a component of an effective coast wide alternative. In the assessment of those features for consideration as possible critical near-term actions, the Blue Hammock Bayou was also deemed to meet the implementation criteria for inclusion. However, in subsequent discussions within the PDT there was some indication that uncertainty regarding the local hydrology may need to be addressed. The criterion of restoring (or mimicking) fundamentally impaired deltaic function through river reintroduction is a key in this instance. While the proposed action should be effective, the function does appear to be impaired. The deltaic function, the introduction of freshwater through backwater hydrologic effects, is ongoing. A natural consequence of this effect that would also expected in the future is the depositional reduction of water bodies under this backwater effect. As a result of these considerations, the Blue Hammock Bayou feature has been recategorized to reflect this uncertainty and has potential for resolution through a demonstration project. Additional text has been added to the Main Report and the FPEIS.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 09: Additional language regarding sequencing of projects and the formation of composite groups, referred to as "restoration opportunities" in the Main Report and FPEIS, has been included in the final report.

DOI 10: Currently the features identified for a conditional or Congressional Authorization have a significant level of design development. In addition NEPA (EIS) documentation development has already been initiated for these features. The initiation of NEPA compliance is an indication that a critical assessment of alternative actions, which would be a required product for completion of a feasibility-level decision document under the LCA Program, is in progress and being documented. While the Penchant Basin plan also has a high level of design information, no NEPA compliance effort has been initiated. As a result, there is a less confidence that the Penchant Basin feature could be advanced to the point of construction approval prior to there being another WRDA act considered by Congress, and therefore no need for conditional or Congressional Authorization. It appears that the continued consideration and approval of this feature under the CWPPRA program would result in its most rapid implementation.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 10 (Continued)

on which significant planning/engineering work has been completed should be carefully reviewed and revised as appropriate to improve sequencing consistency (see related comments for the Main Report).

DOI 11

Page 2-98, Section 2.9.2.1.3, Barataria Basin Barrier Shoreline Restoration - The middle of the third paragraph references attachment 4 which we could not locate; that reference should be corrected in the final PEIS. Although the third sentence of the fourth paragraph states, "Material for marsh creation would be pumped from interior open-water sites . . .", other descriptions indicate that sediment would come from exterior sites; that discrepancy should also be clarified or corrected in the final PEIS.

Page 2-106, Section 2.9.2.1.5, Medium Diversion with Dedicated Dredging at Myrtle Grove - We recommend that the description of the WVA methodology be deleted from this project description in the final PEIS.

DOI 12

Page 3-34, Chapter 3 Affected Environment; Section 3.7.2 Existing Conditions - The LCA will affect nearly 1.1 million acres of "swamp/wetland forest", the largest area of all wetland habitats. A larger focus should be placed on monitoring (for example, CRMS) in these habitats to understand, or avoid, habitat switching. Likewise, this acreage estimate is a little misleading since much of the acreage is far enough north to avoid the major habitat degradation vectors along the extreme coast, such as salinity and increased flooding; however, it is the remnant forests that need to be shielded from habitat switching. Influences of a diversion should be sufficient. It would benefit LCA to identify all remnant, degraded baldcypress stands and assign a diversion outflow specifically to each stand (as best as the current LCA plan will allow). This would be a similar approach to all remnant stands as taken for Maurepas, however, without assigning dedicated diversions.

DOI 13

Page 3-58, Chapter 3 Affected Environment; Section 3.14 Hydrology, Subsection 3.14.3.1 Historic and Existing Conditions, paragraph 1 - The last sentence would be improved by adding: "In southwestern Louisiana" large amounts of fresh groundwater are generally available, and groundwater is used for most purposes.

DOI 14

Page 3-58, Chapter 3 Affected Environment; Section 3.14 Hydrology, Subsection 3.14.3.1 Historic and Existing Conditions, paragraph 2 - Paragraph 2 states "The Mississippi River and some of its distributaries were the largest sources of surface water….," but it doesn't indicate when this was true. Insert "During 2000," at the beginning of the paragraph, or swap the positions of the 2nd and 3rd paragraphs so that the reader will understand that the withdrawal information in the second paragraph is from 2000.

DOI 15

Page 3-58, Chapter 3 Affected Environment; Subsection Section 3.14.4.1 Historic and Existing Conditions, paragraph 2, lines 1-5 - The first sentence of the second paragraph in this section states **Section 3.14 Hydrology** that "Groundwater is at or near the surface …." The USGS suggests changing "Groundwater" to "The water table." Although ground water is found at relatively shallow depths in this area, statements made in the rest of the paragraph indicate that the author was referring to the water table in unconfined aquifers rather than ground water in confined aquifers that occur at deeper depths and are not hydraulically connected to surface-water bodies. In the second sentence, suggest changing "ground-water level" to "elevation of the water table."

DOI 11: The correct reference for the attachment has been included in the FPEIS. The sentence regarding interior borrow sites has been deleted; priority borrow sites are from exterior sites. The WVA methodology has been deleted from the Myrtle Grove feature description.

DOI 12: Implementation of certain components of the LCA Plan would re-introduce freshwater, sediment, and nutrients to "swamp/wetland forest" in order to restore and protect remnant forest stands, particularly within portions of the Maurepas Swamp and the area surrounding Lac Des Allemands (Subprovinces 1 and 2). It is not the intention to encourage, or indirectly contribute to, habitat switching in these essential habitats. Monitoring efforts under the S&T Program would, among other things, identify the ecosystem responses as a result of the implementation of the LCA Plan, including responses from swamp/wetland forest habitats. The LCA Plan does not identify every forest stand in the coastal zone and does not recommend individual restoration features for each of these wetland forest habitats; however, over the course of implementation and during continued research and monitoring efforts under the S&T Program, new restoration features can be developed to respond to critical needs of the ecosystem, including those identified in swamp/wetland forest habitats. During the five-year review and update of the LCA Plan, new features could be added.

DOI 13: Text has been revised accordingly in the FPEIS.

DOI 14: Text has been revised in the FPEIS to include a time reference to the statements in question.

DOI 15: Text has been revised accordingly in the FPEIS.

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DOI 16 — Page 3-60, Chapter 3 Affected Environment; Section 3.14 Hydrology; Section 3.14.4.1 Historic and Existing Conditions, lines 2-3 - A line break is needed between the first and second paragraphs on the page. "No major sources of fresh ground water ...." starts a new paragraph.

DOI 17 — Page 4-31, Section 4.4.3, Restoration Opportunities – Indirect Impacts - The text should be revised to indicate that other islands within the barrier island chain may also receive indirect benefits from the introduction of sand via littoral drift from newly rebuilt islands.

DOI 18 — Page 4-34, Chapter 4 Environmental Consequences; Section 4.6.1 Future Without-Project Conditions-The No Action Alternative, table 4-3 - The caption creates confusion – What is meant by "Future?" Is this a 20-, 50-, 100- year projection? The acreage is without context – larger or smaller than present. Please revise for clarity.

DOI 19 — Page 4-46, Chapter 4 Environmental Consequences; Section 4.6.5, Invasive Species - There are two invasive species elements of concern to this section that need to be addressed. First, Chinese tallow (*Sapium sebiferum*) is and will remain a major part of all post-rehabilitation plans described in the LCA. Full ecosystem "restoration" will not be attained until this species is controlled or at least managed as a less dominant entity.

The second element includes species, such as black willow (*Salix nigra*). Although *Salix nigra* is a native species to the southeastern U.S., it probably will be considered as an invasive species during many restoration programs. Cypress and water tupelo (*Nyssa aquatica*) should eventually take hold in some locations, but restoration will be greatly augmented with active measures to plant, monitor, and nurse ecosystems in light of invasive species concerns.

DOI 20 — Page 4-67, Section 4.12, Threatened and Endangered Species - Please refer to our general comment above concerning threatened and endangered species, as well as our specific comments on the BA contained in Appendix B1. We also recommend that this section be revised in the final PEIS to include the Corp's summary "not likely to adversely affect" determinations for the TSP.

DOI 21 — Page 4-70, Section 4.13.1.3, Restoration Opportunities – Indirect Impacts - The first paragraph references California Bay and Bayou Lamoque as diversion project receiving areas, however, diversions into those areas are not part of the TSP; the PEIS should be revised accordingly.

DOI 22 — Page 4-72, Section 4.13.2.3, Restoration Opportunities – Indirect Impacts - Diversions into American and California Bays are not part of the TSP; the PEIS should be revised accordingly.

DOI 23 — Page 4-80, Chapter 4 Environmental Consequences, Section 4.14 Water Quality Resources, Subsection 4.14.2 Comparison of Near-Term Restoration Opportunities, second full paragraph, last sentence - "The concentrations of such introduced compounds would not, in the best professional judgment of the USGS, be sufficient to exceed alert levels, or harm the environment."

The above quoted sentence is only true of the streambed sediments in the main channel of the Mississippi River; however, there is substantial contamination in the streambed sediments of some of the other major water bodies, such as the Bayou Lafourche and the Calcasieu River, in the Louisiana Coastal Area. The Department recommends that the quoted sentence be revised to reflect the above stated qualifying statements. Additionally, the revised sentence should be cited as a written communication as follows:

DOI 16: Text has been revised accordingly in the FPEIS.

DOI 17: Additional language has been included to the FPEIS to state that other barrier islands within the barrier island system may also receive indirect benefits from the introduction of sand via littoral drift from newly rebuilt islands.

DOI 18: Table 4-3, the Future-Without Project time frame, is the same as the Future With Project time frame-50-year project life.

DOI 19: Additional text has been incorporated in the FPEIS discussion on invasive species to include the Chinese tallow and the black willow.

DOI 20: Text has been revised: "Hence, based upon the potential direct, indirect, and cumulative impacts, implementing ALT B/ALT C/TSP is not likely to adversely affect threatened or endangered species or their critical habitat. In addition, the response to DOI 02 has also been included in the first paragraph of this section.

DOI 21: Text has been revised accordingly.

DOI 22: Text has been revised accordingly.

DOI 23: The paragraph will be replaced with the following: "The reintroduction of streambed sediments into the LCA Plan area may add some contaminants; these would include primarily trace metals and hydrophobic organic compounds from Mississippi River streambed sediments. Trace metals and hydrophobic organic compounds such as pyrenes, hexachlorobenzene, and chlorinated hydrocarbons such as DDT, or its degradates, would adsorb onto sediment particles or the organic coatings of sediment particles (USGS written correspondence). The types of contaminants potentially released would vary with project location and be site specific.

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DOI 23 (Continued): As mandated by Section 404(b)(1) of the Clean Water Act, CEMVN is required to demonstrate that the reintroduction of sediments into a proposed study area, "will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern". USGS citation: C.R. Demas and D.K. Demcheck, U.S. Geological Survey, written correspondence, 2003.

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DOI 23 (Continued)

(C.R. Demas and D.K. Demcheck, U.S. Geological Survey, written Commun, 2003).

Regarding "alert levels," there are no enforceable alert levels per se for streambed sediments; they merely serve as suggested criteria.

DOI 24

Page 4-122, Section 4.23.1, Federal, State, Local and Private Restoration Efforts - This section largely describes the positive cumulative impacts of all restoration actions; it should be revised include the cumulative negative impacts of those efforts.

DOI 25

Page 6-3, Section 6.1.1.4, Fish and Wildlife Coordination Act Report - This section should be revised in the final PEIS to indicate that Fish and Wildlife Coordination Act Reports will also be required for all future individual projects/feasibility studies.

DOI 26

Pages B1-1 through B1- 43, Appendix B1, Programmatic Biological Assessment - The FWS offers the following comments in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended, 16 U.S.C. 1531 et seq.). The LCA draft biological assessment (BA) discusses the effects of implementing the proposed plan on Federally listed threatened and endangered species. Those species for which the FWS has jurisdiction include the threatened Louisiana black bear (*Ursus americanus luteolus*), the endangered West Indian manatee (*Trichechus manatus*), the threatened bald eagle (*Haliaeetus leucocephalus*), the endangered brown pelican (*Pelecanus occidentalis*), the threatened piping plover (*Charadrius melodus*), the endangered red-cockaded woodpecker (RCW, *Picoides borealis*), the threatened gopher tortoise (*Gopherus polyphemus*), the threatened loggerhead sea turtle (*Caretta caretta*) while nesting onshore, the threatened ringed map (=sawback) turtle (*Graptemys oculifera*), the threatened Gulf sturgeon (*Acipenser oxyrhynchus desotoi*) in riverine habitats, the endangered pallid sturgeon (*Scaphirhynchus albus*), the threatened inflated heelsplitter mussel (*Potamilus inflatus*), and the endangered Louisiana quillwort (*Isoetes louisianensis*).

According to the BA, the RCW, gopher tortoise, ringed map turtle, inflated heelsplitter mussel, and Louisiana quillwort may occur within the boundaries of the proposed action area. The proposed activities, however, would not be located within suitable habitat for those species. Any suitable habitats for those species would be located outside the region of influence for the proposed action. Thus, the FWS concurs with your determination that the proposed action would not affect those species.

Several LCA-proposed activities/projects could potentially occur within occupied Louisiana black bear habitat along the coast of Iberia and St. Mary Parishes; however, developing project plans and construction activities that avoid or minimize work in occupied habitat during the black bear denning season would avoid disturbing pregnant females and/or females with cubs. Outside the denning season, bear sightings may still occur when working in occupied habitat, but maintaining clean work sites and providing bear-proof trash receptacles for construction crews could minimize the risk of bear disturbance and conflicts. If sightings do occur, bears are likely to avoid humans, and would only be temporarily displaced by disturbance from construction activities. Habitat loss, if any, should be minimal. Therefore, the FWS concurs with your determination that the proposed action is not likely to adversely affect the Louisiana black bear.

The West Indian manatee is known to occur periodically in the coastal waters of Louisiana. Consequently, an on-board observer would be present during construction activities to alert the proper personnel, and harmful activities (e.g., dredging) would be temporarily suspended until

DOI 24: Definition of negative impacts is complicated by several factors. First, what typically indicates a negative impact in certain ecosystems, such as filling shallow water to construct land or introducing turbid nutrient rich water to aquatic ecosystems, may be an intended purpose or action within the wetland restoration program. Second, the Louisiana coastal ecosystem is degrading rapidly, with rapid landward shifts of isohalines and habitat conversions. Restoration projects designed to reverse these trends may negatively impact a given resource or habitat type on the project scale in the near-term, but overall, the health of the ecosystem will be improved compared to Future Without-Project conditions once the system reaches a new equilibrium. It is important to keep this in mind when defining negative impacts. Some impacts have been observed, however, and include wetland destruction for diversion outfall channels, temporary displacement of terrestrial and aquatic life, disruption of benthic habitats, turbidity due to construction activities, and construction noise. These impacts are generally temporary in nature and when necessary, have been mitigated.

DOI 25: The following text has been added to Section 6 in the FPEIS: " A Fish and Wildlife Coordination Act Report would be required for all future individual projects and feasibility studies that would tier from this programmatic statement."

DOI 26: Should any threatened or endangered species be sighted within any work area, the USFWS Lafayette, Louisiana Field Office would be contacted immediately. The use of recommended primary activity exclusion zones and timing restrictions would be utilized, to the maximum extent practicable, to avoid project construction impacts to any threatened or endangered species or their critical habitat (especially bald eagles, sea turtles, Louisiana black bear, brown pelicans, piping plovers or their critical habitat, and pallid sturgeon or their critical habitat) within the study area.

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the animal can move to safety. Should a manatee be sighted within any work areas, the FWS Lafayette, Louisiana, Field Office would be contacted immediately. Therefore, the proposed action is not likely to adversely affect the West Indian manatee.

Site-specific plans and construction activities could be designed to avoid potential impacts to bald eagles throughout the action area. By adhering to the primary activity exclusion zone and timing restrictions outlined in the Bald Eagle Recovery Plan, the Corps can avoid impacts to nest trees and breeding behaviors. Bald eagles may also be impacted from contaminants introduced into their food source through water and sediments diverted from the Mississippi River into areas containing foraging and/or nest sites. A study is currently being conducted on the effects of contaminants contained in water diverted from the Mississippi River on the bald eagle as a result of the implementation and operation of the Davis Pond Freshwater Diversion Structure. Although those data regarding effects on bald eagles from contaminants that may be associated with river and sediment diversions are not currently available, the Corps would reinitiate consultation with the FWS, if necessary, once those data become available. Therefore, the FWS concurs that the proposed action is not likely to adversely affect the bald eagle.

Brown pelicans nest on barrier islands and feed in shallow estuarine waters, using sand spits and offshore sand bars as rest and roost areas. Any pelicans foraging or loafing within the proposed action area during construction could easily relocate to other foraging areas in the vicinity. Potential impacts to nesting brown pelicans could be avoided by conducting activities outside the nesting season. Should the proposed activities occur during the nesting season, those activities could avoid impacting nesting pelicans by remaining outside 2,000 feet of nesting areas. Therefore, the FWS concurs that the proposed action is not likely to adversely affect the brown pelican.

Potential impacts to piping plovers could be avoided by conducting proposed construction activities outside the wintering season (July to late March or April). If any proposed projects cannot be scheduled to take place outside the wintering season, piping plovers would be able to avoid areas of temporary disturbances as long as there are feeding and/or roosting areas available along the coast. Because any plovers remaining in the action area during construction would be temporarily displaced to other suitable habitats in the vicinity, the FWS concurs that the proposed action is not likely to adversely affect the piping plover.

Potential impacts on piping plover critical habitat would be minimal and temporary during projects associated with barrier island enhancement or restoration. Although the proposed action may impact a barrier island designated as critical habitat, only a relatively small amount of habitat will be affected when compared to the amount of critical habitat available. These minimal and temporary disturbances would not be likely to affect the ability of the Critical Habitat to provide for the recovery of the species. In addition, most of the proposed barrier island restoration projects may possibly create new potentially suitable habitat (beach) for the piping plover on the Gulf side of the islands and prevent/reduce erosion of existing habitat in the vicinity. Therefore, the FWS concurs that the proposed action is not likely to adversely affect critical habitat for wintering piping plovers.

Within Louisiana, the loggerhead sea turtle has only been known to nest on the Chandeleur Islands. Because of storm processes, the Chandeleur Islands may no longer contain high beach and dune surfaces (i.e., beach structure suitable for nesting). Furthermore, recent surveys by FWS National Wildlife Refuge (NWR) personnel have found no loggerhead nests in the area. The restoration of the Terrebonne and Grand Isle barrier island chains would occur in

DOI 26 (Continued)

DOI 26 (Continued): In addition, the use of recommended primary activity exclusion zones, and timing restrictions would be utilized to the maximum extent practicable to avoid project construction impacts to brown pelicans that inhabit the study area.

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DOI 26 (Continued)

Subprovinces 2 and 3 with the proposed action. While nesting loggerhead sea turtles have historically used barrier islands, as stated above, it is doubtful that they currently nest anywhere on the Louisiana coast. The restoration of barrier islands may or may not provide suitable nesting habitat, but suitable nesting habitat is nearly nonexistent due to the current degraded state of those islands. The proposed action, therefore, would not negatively affect loggerheads, and may provide some benefit to the species by restoring nesting habitat. Accordingly, the FWS concurs that the proposed action is not likely to adversely affect nesting loggerhead sea turtles. Please be advised that the FWS is responsible for consultation only when loggerhead and other sea turtles leave the aquatic environment and come onshore to nest. The National Marine Fisheries Service (NMFS) is responsible for aquatic marine threatened or endangered species. Please contact Eric Hawk, NMFS, (727/570-5312), in St. Petersburg, Florida, for information concerning this and other sea turtle species in their aquatic environment.

Potential impacts to the Gulf sturgeon may result from river and/or sediment delivery diversions from the Mississippi River into the LaBranche wetlands and the "Golden Triangle" wetlands. Those wetland complexes would receive fresh water from the river, and the affected brackish marshes could convert to intermediate marsh as a result. While the Gulf sturgeon is known to occur within the Pearl River system, project impacts are not expected to extend into that area. Therefore, the FWS concurs that the proposed action is not likely to adversely affect Gulf sturgeon or adversely affect its critical habitat within that river system. While the FWS is responsible for consultations in riverine habitats, the NMFS has consultation responsibility for projects impacting the Gulf sturgeon in marine habitats. In estuarine habitats, consultation responsibility is based on the lead action agency: NMFS is responsible for consultations with the U.S. Army Corps of Engineers in those habitats. We, therefore, recommend that you contact Stephania Bolden, NMFS, (727/570-5312), in St. Petersburg, Florida, for concurrence concerning this species in marine and estuarine habitats.

Potential impacts to the pallid sturgeon may occur due to proposed river diversions or modifications to the Mississippi River and Atchafalaya River flows. Impacts associated with those proposed activities include but are not limited to increased turbidity, re-suspension of contaminants, and physical disturbance associated with dredging or other project construction activities. There are ways, through timing and use of different types of dredges, to minimize impacts to the pallid sturgeon caused by dredging activities. The pallid sturgeon is not likely to be affected by construction or operation of freshwater diversion structures along the Mississippi or Atchafalaya Rivers because it is a bottom dweller and is not likely to be entrained into such structures. Furthermore, the Mississippi and Atchafalaya Rivers are large enough to provide an abundance of refuge areas during construction activities or operation of any proposed diversion structures, and pallid sturgeon, as well as their prey species, should be able to actively avoid dredging sites. Therefore, the FWS concurs that the proposed project is not likely to adversely affect the pallid sturgeon.

Finally, consultations such as this one, involving a Federal agency proposal to adopt or approve a management plan or strategy that would be used to guide the development and implementation of future projects, are termed "programmatic consultations." Several courts have ruled that the decision to adopt plans or strategies that guide the implementation of future individual actions, as well as each future individual action itself, must fulfill the requirements for consultation under Section 7 of the ESA. Accordingly, while potential impacts associated with the proposed Louisiana Coastal Area Ecosystem Restoration Study TSP have been addressed at the programmatic level, an additional Biological Assessment/Biological Evaluation should be

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DOI 26 (Continued)

prepared when individual projects tiered to that plan/PEIS may affect a Federally listed threatened or endangered species and/or adversely affect designated critical habitats.

Main Report – Volume I

General Comments

DOI 27

The draft Main Report is generally well-written and organized. The Department, with the revisions proposed below, strongly supports approval and implementation of the near-term TSP for the LCA. Implementation of the proposed TSP is a critically needed next step toward sustainably restoring Louisiana's imperiled coastal wetland ecosystem. Accordingly, our comments primarily focus on the need for revising the draft Main Report to address recommendations concerning the prioritization/selection of TSP projects and features, as well as procedural and administrative revisions intended to facilitate TSP approval and implementation. While we appreciate inclusion of Fish and Wildlife Coordination Act and Endangered Species Act documentation in the PEIS, we suggest the material might be better suited as appendices to the Main Report, where they are appropriately addressed.

DOI 28

Despite the extensive and successful cooperative efforts to make it more inclusive and participative, the LCA fundamentally remains a Corps of Engineers Civil Works Program proposal. Nevertheless, the Department believes that the strictly advisory role of the proposed LCA Task Force agencies should be expanded to include a greater degree of participation in the actual decision-making process which, as currently envisioned, would primarily reside with the Corps and the local sponsor. The efficiency and success of the CWPPRA Task Force, in contrast, underscores the notion that a more participative decision-making role for the LCA Task Force agencies would enhance identification and selection of preferred project alternatives and result in more transparent evaluations of the benefits and impacts of those alternatives. Such shared decision-making roles could also facilitate certain aspects of project construction, operation, and monitoring.

DOI 29

As discussed in the FWS May 2004 Draft Fish and Wildlife Coordination Act Report, and in the specific comments below, the environmental change/benefits forecasting methodology should also be improved and refined as a high priority of the proposed LCA Science and Technology Program. From a technical standpoint, valid model outputs will be essential to assessing project benefits and impacts. Procedurally, those data will also be required to ensure that the FWS can fulfill its mandates under the Fish and Wildlife Coordination Act, and meet the procedural requirements of National Environmental Policy Act and related planning policies and procedures.

DOI 30

The draft Main Report should also be revised to more fully explain how the sequencing rules were used to prioritize implementation of the features that comprise the Plan that Best Meets Objectives, to clarify why composite groups were prioritized separately, and to provide the reasoning for prioritization decisions (as seen in Section 3.5.2). While we certainly agree that implementation readiness is a key consideration, the sequencing rules should be revised to give more weight to the capability of such projects to address critical near-term ecological needs. For example, there is another alternative project to the proposed Small Bayou Lafourche Reintroduction Project, which does not meet the criteria of meeting critical ecological needs and cost effectiveness; that alternative would more effectively and logically fulfill the critical near-term ecological needs of the eastern Terrebonne Basin. If it is truly one of the five projects that meet the most critical ecological needs, a better justification is needed.

DOI 27: The Fish and Wildlife Coordination Act Report and the Endangered Species Programmatic Biological Assessment will remain as appendices to the FPEIS, and as an attachment to the Main Report.

DOI 28: Implementation of the LCA Program will be governed by the same rules and regulations typically employed in Water Resource Development Act programs. That is, decision making will be vested with the USACE, on behalf of the Federal Government, and the State of Louisiana as the local sponsor. It is recognized that close coordination with other Federal and State agencies is required for the ultimate success of the program. The LCA Task Force, the Regional Working Group, the S&T Program, and the collocated Program Execution Team provide significant opportunities for other Federal and state agencies to actively participate in program decision making and to facilitate aspects of project construction, operation, and monitoring.

DOI 29: While the precision of the current models for identifying absolute biologic outputs is currently limited, their outputs are appropriate for the comparison and identification of alternative actions. It has been recognized and acknowledged by the model developers that the potential for improvement in the precision of the models exists. It is important that the modeling effort be developed to increase the precision and uniformity of both input and output. This is a priority for future restoration plan development, implementation, operation, and management. A significant portion of this model development effort would likely be undertaken through the proposed S&T Program. It has also been acknowledged that additional models may by appropriate for the purpose of quantifying more absolute ecologic outputs.

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DOI 29 (Continued): Text has been added in the plan implementation section of the Main Report to further identify the need for modeling tools to be capable of supporting and providing consistency for other agency regulatory and management efforts.

DOI 30: The sequencing of the features identified in the PBMO is based on determining the most effective possible manner to bring those features to approval and construction. All of the features identified in the PMBO are by definition critical in nature. However, levels of fiscal appropriation, feature readiness, and the potential for conflict with future restoration actions under consideration do not support the immediate initiation of every feature. The expected annual cost-shared appropriation limit of approximately $200 million provides a basic guide for the amount of work that can be underway in any year. The level of development and status of NEPA documentation provides insight into which features could be brought to construction approval and implementation most rapidly. The most ready features could benefit from a conditional or Congressional authorization. Some features are potentially redundant to long-range concepts and therefore will not be considered until after these concepts are complete. Therefore, these features cannot be implemented in the ten-year near-term. Other features are nearly ready for implementation through other programs and funding authorities.

This information has been integrated into the plan implementation section of the Main Report.

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Specific Comments

DOI 31 Page IX, Executive Summary; Science and Technology Program Section, lines 17-20 - The objectives as stated for the S&T Plan in the main report are different from the objectives stated in the S&T Plan, Appendix A. The Department recommends using the objectives in Appendix A.

DOI 32 Page X, Executive Summary; Science and Technology Program Demonstration Projects Section, paragraph 2, bullets 3 and 4 - Pipeline canal restoration using "different methods" and Shoreline erosion prevention using "different methods". These statements are too general and the different methods should be elaborated on; that is, whatever they are or at least a few examples of each. The public and Congressional persons have routinely questioned the demonstration projects. Thus the report should be specific in explaining these projects and justifying them.

DOI 33 Page XV, Executive Summary; Areas of Controversy Section, paragraph 3 - "Elements of the public expressed concern that the LCA restoration effort will focus on the need for more studies rather than construction, operation and maintenance of restoration projects."

This is not something that the plan should take lightly, given the current perceptions with the "restoration" effort in South Florida. Science seems (that is, public perception) to be funded to a greater degree than scientific support for restoration in the Everglades, especially since, to date, little engineering has been implemented. The LCA Office of Science and Technology should consider adding this to their area of responsibility and budget, whether this includes periodic public meetings, bulk mailings of information flyers, or signs and on-line links that describe all elements of projects before, during, and after implementation. This is mentioned in the "Science guiding principles (Appendix A, P. A11)" as "Clear lines of communication would be established…[with] the public as appropriate through a coordinated effort." Details behind the dissemination of fact versus fiction within the public perception should be addressed specifically by the LCA plan.

DOI 34 Page MR-4, Section 1.0 Introduction; Subsection 1.3 Study Purpose and Scope, paragraph 1, line 2 - After "and sediments to coastal wetlands", add: "restore coastal hydrology to minimize saltwater intrusion."

DOI 35 Page MR-5, Section 1.0 Introduction; Subsection 1.4 Study Area Description, paragraph 2 - The Study Area Description is missing parishes that encompass the Atchafalaya Basin for Subprovince 3.

DOI 36 Page MR-6, Section 1.0 Introduction; Subsection 1.4 Study Area Description, figure MR-1 - Subprovince 3 needs to be extended to include the Atchafalaya Basin up to Old River Control Structure.

DOI 37 Page MR-17, Section 1.0 Introduction; Subsection 1.6.2.1 The Mississippi River and Tributaries (MR&T) Project, figure MR-11 - The figure shows 630,000 cubic feet per second (cfs) going through the control structure, whereas the text shows 620,000 cfs; need to clarify this discrepancy.

DOI 38 Page MR-18, Section 1.0 Introduction; Subsection 1.6.2.1, paragraph 4 - Under Caernarvon-Davis Pond Freshwater Diversion Projects, replace in last sentence, "non-support" with "environmental concerns."

DOI 31: The statement of objectives for the S&T Program in the main report has been revised to be consistent with those stated in Appendix A.

DOI 32: More detailed discussion of the demonstration projects program, and the initial set of relevant uncertainties that they are designed to resolve has been included in the Main Report.

DOI 33: Additional language regarding outreach efforts associated with the progress of the LCA Plan implementation, and the efforts underway through the S&T Program have been included in Appendix A and Section 5 of the Main Report.

DOI 34: Text has been revised accordingly.

DOI 35: See General Response # 3 regarding the LCA Study Area and the Atchafalaya Basin.

DOI 36: See General Response # 3 regarding the LCA Study Area and the Atchafalaya Basin.

DOI 37: Inconsistencies in the text and the figure have been corrected.

DOI 38: The sentence has been revised to state "…opposition by non-Federal interests because of environmental concerns."

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DOI 39 Page MR-33, Subprovince 3, last paragraph - The first sentence incorrectly states that the western Terrebonne marshes are isolated from riverine influences and that the hydrology of those areas is dominated by rainfall and marine processes. That sentence should be corrected in the final Main Report to indicate that the western Terrebonne Basin marshes receive significant riverine influence through Atchafalaya Bay, the Avoca Island Cutoff Channel, Bayou Chene and adjoining waterways.

DOI 40 Page MR-34, Section 2.0 Problem Identification; Subsection 2.2.1.1.1, paragraph 1, lines 1-3 - Please clarify: "the lower Atchafalaya River Basin pass through the Upper Atchafalaya River Basin, which is not within the LCA Study Area." The Upper Atchafalaya River Basin should be in the study area.

DOI 41 Page MR-34, Section 2.0 Problem Identification; Subsection 2.2.1.1.1, paragraph 3, lines 1-3 - Add GIWW as a major navigation channel.

DOI 42 Page MR-38, Section 2.0 Problem Identification; Subsection 2.2.2.1.1, Deltaic & Chenier Plains paragraph 1, line 4-5 - We suggest replacing coastal "marshes" with "wetlands."

DOI 43 Page MR-41, Barrier Island Systems, first paragraph - This paragraph should be revised in the final report to acknowledge that the FWS manages the Breton Island NWR, on behalf of the public.

DOI 44 Page MR-43, first paragraph - The substantial increase of Subprovince 3 future-without project intermediate marsh acreage is likely not a function of deltaic land-building, as stated. Because future without-project projections (Page PEIS pp. A1-13, Table 14) show this increase as occurring primarily between target years 0 and 10, it is likely due to the averaging of salinities across large, predominately fresh marsh tracts in the salinity/habitat forecasting methodology. Although that method is satisfactory at the programmatic level, (see Appendix A Science and Technology Plan), future habitat distribution methodology refinements are needed, and should be a high priority of the Science and Technology Program. We recommend that this paragraph be revised to accurately reflect that need.

DOI 45 Page MR-43, Section 2.0 Problem Identification; Subsection 2.2.2.2.1, Deltaic & Chenier Plains, paragraph 1, lines 3-5 - Davis Pond Diversion was not in operation until December 2003, and could not have any influence until then.

DOI 46 Page MR-48, Section 2.0 Problem Identification; Subsection 2.2.2.2.2 Quantification of future land loss, Subprovince 3, paragraph 3, line 1-2 - Remove "and Atchafalaya Bay."

DOI 47 Page MR-48, last paragraph - The first sentence states that East Cote Blanche and Atchafalaya Bays will experience "increased marine influences." In the past, however, those areas have experienced a freshening trend that is expected to continue; also, wetland loss in those areas is mainly attributable to physical shoreline erosion, which is independent of salinity (i.e., marine influences). We recommend that this paragraph be revised for accuracy.

DOI 48 Page MR-57, Recreation Section - This section should be revised to emphasize that the Service manages more than 300,000 acres of National Wildlife Refuge (NWR) lands in coastal Louisiana on behalf of the public. Where threatened by significant losses, future LCA investments may be

DOI 39: Text has been revised to correctly summarize hydrology in the Terrebonne Basin.

DOI 40: See General Response # 3 regarding the LCA Study Area and the Atchafalaya Basin.

DOI 41: Text has been revised accordingly.

DOI 42: Text has been revised accordingly.

DOI 43: Language has been included in the text to state that the FWS manages the Breton Sound NWR on behalf of the public.

DOI 44: The possibility that salinity averaging in the model may result in the projected increase in intermediate marsh is very probable. The text has been changed to reflect the language in the comment.

DOI 45: The acreage estimate from the USGS reflects a start-up for Davis Pond during year 2003.

DOI 46: Concur. While the wetlands in the Atchafalaya Delta would be affected by some marine processes, the area is in a growth phase and should continue to grow regardless. The text has been revised by deleting "and Atchafalaya Bay."

DOI 47: A continuing problem in these areas, with the exception of Atchafalaya Bay (see DOI 46), is large and rapid fluctuations in salinity levels. The continued growth of the Atchafalaya Delta complex should eventually minimize this influence, however, current indications are that the mere presence of fresh water does not eliminate the effect of these marine incursions. As a result, it is not inaccurate to indicate that there are some detrimental effects that would continue to be seen without additional action.

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DOI 48: Additional language has been included in the text to mention the management of public lands in the Louisiana coastal zone by the FWS.

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needed to protect and restore those public lands. Likewise, those NWR lands may also provide benefits associated with future LCA demonstration and research projects. DOI 48 (Continued)

DOI 49 Page MR-60, Section 2.0 Problem Identification; Subsection 2.3.1 Problems, paragraph 2, bullet 6 -We suggest that bullet 6 be revised to reference both the Mississippi and Central Flyways.

Page MR-67, Section 3.0 Plan Formulation; Subsection 3.1, Planning Constraints, paragraph 1, line 7 - Add "public water supply" after "flood control."

DOI 50 Page MR-68, Section 3.0 Plan Formulation; Subsection 3.1.1, Scientific and Technological Uncertainties - Geographic Information Systems (GIS) are mentioned on page MR-74 with reference to socio-economic/political uncertainties. While this example is fine, geospatial technology (GIS, remote sensing, etc.) should be mentioned early on in this section so that it is clear that the technology could be used in almost all of the uncertainties associated with the study.

DOI 51 Page MR-68, Section 3.0 Plan Formulation; Subsection 3.1.2. Type 1 - Uncertainties about Physical, Chemical, Geological, and Biological Baseline Conditions, paragraph 1, line 3 - Continued improvement of tools and networks [add] **and the acquisition of data** to better establish these baseline conditions would allow for more detailed and coastwide monitoring and assessment, which would better support program level, as well as project level, Adaptive Management, which is described in Appendix A: Science and Technology Program.

DOI 52 Page MR-69, Section 3.0 Plan Formulation; Section 3.1.2.1, paragraph 1, line 3 -We suggest changing "hydrologic stage and discharge data" to "hydrologic stage, discharge, and water-quality data."

DOI 53 Page MR-70, 3.0 Plan Formulation; Subsection 3.1.2.1, bullet 3, lines 3 – 4 -Through CWPPRA, a Coastwide Reference Monitoring System (CRMS) [add] "**for wetlands (Steyer et al. 2003)** is being established…." "Networking the CRMS and BICM [spell out BICM (Barrier Island Comprehensive Monitoring)] to function as one comprehensive monitoring program would help address network…."

DOI 54 Page MR-88, Section 3.0 Plan Formulation; Subsection 3.3.4.1, Development of Subprovince Frameworks, paragraph 1 -We recommend that the "reduce," "maintain," " and "increase" frameworks be more fully explained in the main Report; it would also be helpful to reference and revise **Page MR-82, Section 3.3.1, paragraph 2,** to indicate the importance of understanding those scales and their effects in subsequent planning phases. The text on **Page MR-88** should also explain how a given project can be included within several frameworks.

DOI 55 Page MR-93, Section 3.0 Plan Formulation; Subsection 3.3.4.2 Evaluations of Subprovince Frameworks, paragraph 1, last line - Appendix C HYDRODYNAMIC AND ECOLOGIC MODELING should read Appendix C HYDRODYNAMIC AND ECOLOGICAL MODELING.

DOI 56 Page MR-114, Convey Atchafalaya River water to Terrebonne . . . - The last sentence of this project description should be corrected to read "This feature also includes increasing freshwater supply through repairing banks along the GIWW, enlarging constrictions in the GIWW, and diverting additional Atchafalaya River freshwater through the Avoca Island Levee into the Bayou Chene/GIWW system."

DOI 49: Text has been revised accordingly.

DOI 50: Language has been included in the text to state that GIS technology could be used to help address almost all of the uncertainties associated with the LCA Study.

DOI 51: Text has been revised accordingly.

DOI 52: Text has been revised accordingly.

DOI 53: Text has been revised accordingly.

DOI 54: Additional language has been included in the text regarding the development of subprovince frameworks and planning scales.

DOI 55: Text has been revised accordingly.

DOI 56: Text has been revised accordingly.

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DOI 57

Page MR-116, Maintain Timbalier Land Bridge - All but the first sentence should be deleted and replaced with the following: "A 2,000-foot-wide, 21-mile-long, segmented marsh and low ridge land form (roughly 5,000 acres) would be constructed from the east bank of Bayou Terrebonne near Bush Canal to the west bank of Bayou Lafourche near the southern terminus of the hurricane protection levee. That land form would be constructed of sediment excavated and piped from the Mississippi River, Gulf of Mexico, or nearby bays, and could resemble the long, linear, segmented dredged material disposal islands in Atchafalaya Bay. The nine major bayous which connect the upper subbasin to the downstream lakes and bays would remain open; among others, they include Grand Bayou Blue and Bayous Pointe au Chien, Jean La Croix, Barre, and Tambour. The proposed land bridge alignment is in the upper salt marsh zone, minimizes impacts to existing oyster leases, and avoids most of the oil and gas fields in the Timbalier Subbasin."

DOI 58

Page MR-140, first paragraph - See comments for DPEIS Page 2-65, Section 2.5.2.2, Subprovince 3.

DOI 59

Page MR-152, Sequencing Rules - As noted in our general comments above, we are concerned that only the first-listed rule addresses ecosystem need, the rest pertain to implementation readiness. Because the Near-Term Plan is to address the most critical, near-term ecological needs, we recommend that the project sequencing rules be revised to more strongly emphasize ecosystem needs and areas of greatest future coastal wetland loss.

DOI 60

Page MR-152, Table MR-18 - To more strongly emphasize projects that meet near-term ecosystem needs, Item 13 - Convey Atchafalaya River water to Northern Terrebonne Marshes, should be ranked ahead of both Item 4 - Small Bayou Lafourche Reintroduction Project and Item 6 - Multi-purpose Operation of the Houma Navigation Canal Lock, because the benefits of the latter two projects would be enhanced by those of the first. The 10th ranked project, Increase Amite River Diversion Canal Influence by gapping banks, should be ranked last, due to its limited area of influence and subtle effects.

DOI 61

Pages MR-161 to 163, Section 4.2.3.1.1 - While we understand the proposed Mississippi River Gulf Outlet (MRGO) environmental features restoration feature would meet several critical near-term ecological needs, this section would benefit by including a brief discussion about the relationship between those proposed LCA features, and the continuing evaluation of the MRGO project. The potential impacts of the proposed restoration features to Bayou Sauvage and Breton Island NWRs should also be generically identified in the final Main report.

DOI 62

Page MR-171, Section 4.2.3.1.4, Small Bayou Lafourche reintroduction - The five projects recommended for programmatic authorization should address the "most critical ecological needs." Although the majority of Louisiana's coastal wetland loss occurs within the Barataria and Terrebonne Basins, only a portion of one (i.e., the proposed Small Bayou Lafourche Diversion) of those five projects would provide benefits to Terrebonne Basin marshes. Of the areas that would be benefited by that project, wetland loss rates are generally higher in affected portions of the Terrebonne Basin, than those in the Barataria Basin (see Table 1, below). For this reason, and because operation of the Davis Pond Freshwater Diversion Project will further reduce wetland loss rates within those portions of the Barataria Basin, none of the five Near-Term Projects selected for programmatic authorization would substantially address the critical conditions of the eastern Terrebonne Basin, which will soon disappear if nothing is done to reduce the current high rates of loss there.

DOI 57: Additional language from the comment has been included in the final report.

DOI 58: See comment response for DOI 8

DOI 59: See comment response for DOI 30

DOI 60: See comment response for DOI 30

DOI 61: See General Response on the MRGO restoration feature. Potential impacts to Bayou Savage and Breton Island NWRs have been included in the FPEIS.

DOI 62: The combination of effects from all of the proposed critical near-term features is anticipated to be synergistic. The timing of construction between individual features, or subfeatures, will be dependent on funding, readiness, start of decision document development, and speed of construction. It is not inconceivable that some feature which are initiated later than others arrive at the start or completion of construction at the same time. The sequencing of initiation for the feature in the LCA Plan is not based on the level, or priority, of need (see response to DOI 30 & 59).

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DOI 62 (Continued)

Table 1. Projected loss of 1990 wetland acres (1990 to 2050) within areas benefited by the Small Bayou Lafourche Introduction Project (from the Coast 2050 Plan).

BENEFITED AREAS	projected acres Lost	percent of 1990 wetland acres
Central Terrebonne Basin– HNC area		
Caillou mapping unit	9,960	24.6
Boudreaux mapping unit	10,130	49.2
Central Terrebonne Basin – Bayou Terrebonne area		
Terrebonne marshes mapping unit	19,620	64.5
East Terrebonne Basin – Grand Bayou area		
North Bully Camp mapping unit	10,485	45.0
St. Louis Canal mapping unit	5,020	32.3
Fields Subbasin – Company Canal area		
Fields Swamp mapping unit	3,210	14.1
Barataria Basin – Delta Farms area		
Gheens mapping unit	5,710	29.4
Clovelly mapping unit	5,635	12.1
Barataria Basin – Bayou Perot area	10,370	20.4
Perot-Rigolettes mapping unit		
Barataria Basin – Tidewater Canal area		
Caminada Bay mapping unit	19,560	51.9

The Small Bayou Lafourche Introduction Project would essentially introduce additional fresh water into the GIWW via Bayou Lafourche. However, the most rapidly deteriorating Terrebonne marshes, located in the eastern Terrebonne Basin and south of the GIWW, are largely isolated from the GIWW - only 2 small channels exist that allow GIWW water to flow southward into those areas of need. As a result, a maximum of only 76 cubic feet per second (cfs) of additional freshwater would enter this area through Bayou L'Eau Bleu (of the 1,000 cfs to be introduced into Bayou Lafourche from the Mississippi River). Presently, Bayou L'Eau Bleu receives, on a seasonal basis, up to 500 cfs (Paille, R.F. 1997. Lower Atchafalaya Basin Re-Evaluation Study: a Planning Aid Report on Freshwater Inflows to the Terrebonne Basin. U.S. Fish and Wildlife Service, Ecological Services, Lafayette, LA. 28 pp.) of the 2,000 to 4,000 cfs of Atchafalaya River freshwater that is seasonally available within this reach of the GIWW (Swarzenski, C.M. 2003. Surface-Water Hydrology of the Gulf Intracoastal Waterway in South-Central Louisiana, 1996-99. U.S. Geological Survey Professional Paper 1672. 51 pp.). Rather than introducing more freshwater into the GIWW via the proposed Bayou Lafourche diversion, the Department believes that the most logical and highest priority approach for this portion of the Terrebonne Basin (itself arguably one of the most threatened areas in the ecosystem) would be to construct/enlarge channels to seasonally introduce much larger

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DOI 62 (Continued)

quantities (i.e., 1,000 to 2,000 cfs) of already available freshwater from the GIWW. If ecological needs remain unmet after the available freshwater is used to the greatest extent practical, then the introduction of additional freshwater to the GIWW should be considered, but only if it can be successfully moved southward into the areas of need. Consequently, the Department believes that implementing the "Convey Atchafalaya River Water to Terrebonne Marshes . . ." project (either in its entirety, or only that portion which would improve distribution of existing GIWW freshwater), would more effectively address the critical ecological needs of the eastern Terrebonne Basin than would the 76 cfs (or less) that would be introduced via the Small Bayou Lafourche Reintroduction Project.

In summary, the benefits that would accrue to the Terrebonne Basin from the Small Bayou Lafourche Diversion project could be substantially enhanced if preceded by the implementation of the Convey Atchafalaya River water to Northern Terrebonne Marshes project. Accordingly, the Department recommends that, to enable the LCA to more effectively address critical wetland losses in the eastern Terrebonne Basin, the sequencing of those projects be carefully re-evaluated prior to issuance of the final Main Report.

DOI 63

Pages MR-177-178, Section 4.0 Plan Implementation; Subsection 4.2.5 Science and Technology Program - The text needs to explicitly state that the S&T Program will have an element of autonomy.

DOI 64

The text should explicitly state that the leadership of science should be a Federal-state agency partnership.

DOI 65

The Science and Technology implementation plan must include monitoring, modeling, basic research, and adaptive management feedback. Additionally, long-term monitoring is an operational function generally conducted by Federal and state agencies.

DOI 66

It is absolutely essential for the Science and Technology Program to provide feedback to engineering and future program planning. Thus, it is essential that the Science office report simultaneously to both Program Management and the Execution Team.

DOI 67

Similarly, the appropriations for the Science and Technology Program should be separate, and these budgets should be submitted to Program Management and the Program Execution Team on an annual basis for review and approval.

DOI 68

The S&T Program stated "Develop and implement a comprehensive data-management structure and process." This statement does not go far enough to ensure a successful outcome. There should be an increased emphasis on maximizing existing data-management systems already established to support coastal restoration by the collaborating agencies and science entities and to make the data available to all interested parties. The Federal government spends significant funds on data collection/management, and a reasonable effort should be made to make this information available to all. Funds should also be available to the collaborating agencies if the USACOE wants these historical data sets converted into the same new structure. The Department recommends using existing data-management tools, like National Water Information System (NWIS), as much as possible to ensure Quality assurance/Quality control, provide public access, and minimize redundancy.

DOI 69

Page MR-179, Programmatic Authority for Demonstration Projects, paragraph 1 - Please insert the following after the first sentence:

DOI 63: No element of the LCA Program will operate autonomously. Communication amongst the program elements is vital to successful execution of the LCA plan. However, no other element shall dictate to the S&T Program how to best execute its responsibilities within the context of the overall LCA Plan implementation. Development of science needs, demonstration projects, and the S&T Program's part of the adaptive management process will be managed within the S&T office.

DOI 64: Concur. Text has been added to the appendix.

DOI 65: The S&T Program does include monitoring, modeling, basic research, and adaptive management feedback, as seen in Appendix A.

DOI 66: Concur. It is stated in several places in Appendix A - S&T Plan, that there will be close coordination between Program Management, the Program Execution Team, and the S&T Office. All three of these components will contain engineering, ecological, and planning responsibilities. Figure A-2 further emphasizes this close relationship. However, since different products may be required at different times for the Program Management and the Program Execution Team, it is impractical to require simultaneous submission of all reports. Where appropriate, the S&T Office will provide reports simultaneously to both the Program Management and Program Execution Team.

DOI 67: Appropriations for the LCA Program are not separate. However, budget line items will be expressed and managed by the Program Manager as appropriate for priority and efficient execution of the program.

DOI 68: A data information system is proposed for the purposes of sharing and compiling existing data. It is envisioned that funding for agency participation may occur through inter-governmental transfers from the LCA or through cross-cutting budget authorities. Utilization of existing information management structures will be exercised when appropriate, and data made available after careful quality assurance and quality control (QA/QC) review.

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DOI 69 (Continued)

During the initial planning phases of demonstration projects, and following consultation with the involved State and Federal land management agencies, consideration should be given to locating such projects on public lands (e.g., NWRs or WMAs) or areas that might subsequently be acquired/designated for public purposes, if appropriate. In certain cases, locating such projects on public lands could potentially reduce property rights issues; ensure the long-term protection and management of project features; facilitate adaptive management, monitoring and modifications; and enable public entry/uses, as/ where appropriate.

DOI 70

Page MR-182, Programmatic Authority for Beneficial Use of Dredged Material, paragraph 2 - Please insert the following after the penultimate sentence:

> Where wetland losses and/or comprehensive coastal plans warrant such projects, suitable public lands and water-bottoms (e.g., NWRs or WMAs) may be ideal locations for beneficial placement of spoil projects. In certain cases, locating such projects on public lands could potentially reduce, minimize, and avoid property rights issues; ensure the long-term protection and management of project features; facilitate adaptive management, monitoring and modifications; and enable public entry/uses, as/where appropriate.

DOI 71

Page MR-188, Coastal Louisiana Ecosystem Protection and Restoration Task Force - Because complex and large-scale projects are required to achieve sustainable coastal restoration, continuous support and cooperation will be needed from all involved Federal and State natural resource agencies. To facilitate such support and cooperation, and to better utilize the various agencies' expertise, the Department recommends that all LCA Task Force agencies be included as voting and decision-making partners, much as they are under the CWPPRA Task Force, to the maximum extent practicable.

DOI 72

Page MR-189, Section 4.0 Plan Implementation; Subsection 4.2.7 Science and Technology Office, paragraph 1, line 5 - We reiterate the need to use stronger language reflecting S&T Program independence, so that there is a measure of autonomy. Additionally, the third sentence should be extended as follows: ". . . , yet that office must also fully meet the scientific and technical needs of the participating agencies.

DOI 73

Page MR-193, CWPPRA Task Force - The first two sentences in this section should be carefully revised to eliminate any potential indication that the CWPPRA Task Force would be subordinate to the LCA Task Force; rather, that text should be revised to emphasize that both entities will foster a high degree of cooperation and consultation, inasmuch as both will be essential to implementing sustainable restoration of Louisiana's coastal ecosystem.

DOI 74

Page MR-203, Fee excluding minerals (with prohibition on the use of the surface) - This section should be expanded to include the following:

> Where feasible and appropriate, lands acquired in fee title to implement the TSP may be transferred to an appropriate State or Federal land management agency, following consultation with and concurrence by the receiving agency. Such transfers shall ensure the long-term protection and management of project features; facilitate adaptive management, monitoring and modifications; and enable public entry/uses, as/where appropriate.

DOI 69: While the USACE concurs with the approach, the statement has not been included in the appendix as that inclusion may limit opportunities. Coordination of public lands interests would be accomplished during development of decision documents.

DOI 70: See DOI 69.

DOI 71: See response to DOI 28.

DOI 72: See response to DOI 63. The responsibility of the S&T Office is first, to address the scientific needs of the LCA Program. Within the context of meeting the S&T Program needs, the needs of those participating agencies endeavoring to fulfill the Program requirements will also be met.

DOI 73: While related by composition and focus of their efforts, the two task forces have separate authority and no supervisory relationship to the LCA Program. The execution of the LCA program will likely be the responsibility of the USACE and the Louisiana Department of Natural Resources, and the responsibility for execution of the CWPPRA program will remain vested in the CWPPRA Task Force. Also, text will be revised to clarify the separation of these two working bodies.

DOI 74: The suggested language has not been included in the LCA Plan. The fee acquisition of land will be primarily limited to that required for the construction of permanent elements such as diversion structures, channels, and levees. Significant areas of perpetual estates will be acquired for the purposes of restricting the modification of created wetlands including easements for flowage, deposition, and O&M. During the completion of decision documents for specific feature, the consideration of fee acquisition as a possible optimal means of implementation and management will be considered. The best options for management of any such acquired wetlands will have to be considered by the local cost share sponsor and all the involved management agencies as part of the final implementation recommendations.

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DOI 75

Page MR-213, Streamlined Implementation Process - The Department concurs that streamlining the implementation process is needed, and will continue to work with the LCA cooperating agencies to identify ways to do so while fulfilling the legislative and procedural requirements of the Fish and Wildlife Coordination Act, the Endangered Species Act, and the National Environmental Policy Act.

DOI 76

Page MR-214, Section 4.0 Plan Implementation; Subsection 4.8.4 Monitoring and Adaptive Management, paragraph 1, line 5 - The text should identify the need to increase percentage project funding for monitoring and Adaptive Management.

Main Report, Appendix A – Science and Technology Plan

General Comments

DOI 77

The draft LCA Science and Technology (S&T) Program plan is generally well-written. The Department strongly endorses the concept that sustainable restoration of Louisiana's coastal ecosystem must rest on a foundation of scientific excellence and credibility. We are also acutely aware, however, that much time and effort can potentially be expended on scientific inquiry and research, while Louisiana's coastal ecosystem continues to decay with each passing day. We believe the draft S&T plan lays out a generally sound approach to incorporating the best available science into the LCA program, while focusing on those issues of most direct relevance to meeting the restoration and protection needs of the coastal Louisiana ecosystem.

DOI 78

A near-term, high priority scientific need to support the restoration of Louisiana's coastal wetlands involves addressing the uncertainties related to applied and practical restoration by quickly developing or refining project planning tools, hydrologic and environmental forecasting models and methods, environmental monitoring to facilitate adaptive management, and implementing carefully selected studies and demonstration projects. To reduce restoration uncertainties and facilitate development of effective and sustainable large-scale restoration features, planners must be aware of changing wetland loss patterns, the causes of such wetland loss, and the effectiveness of projects implemented to address that loss. To meet those needs, high-quality imagery of coastal areas such (such as Digital Ortho Quarter Quads or DOQQs) must be made quickly available every 5 years, as should data from which land loss rates can be determined.

DOI 79

Accurate hydrologic models are also extremely important in forecasting existing and future environmental conditions. Such models require extensive elevation/bathymetry data and continuous field data from numerous sites for model calibration and verification. Continuous, quality checked and controlled field data from appropriate locations will be needed to monitor project effects; those data may be also be very useful in guiding the operations of diversion structures.

DOI 80

The distinction between the S&T Program and S&T Plan is not clear and seems to be used interchangeably throughout the text in certain instances. This should be more clearly spelled out earlier in the document. The S&T Program does not intuitively bring to mind a group of scientists or individuals as intended, especially when all other working groups are distinguished as "teams."

DOI 75: Comment noted.

DOI 76: The suggested language has not been included in the Main Report. The report will remain consistent with existing policy and regulations in relation to current limits on monitoring and adaptive management costs.

DOI 77: Concur.

DOI 78: Concur.

DOI 79: No changes have been made because appropriate references to spatial and temporal data requirements are provided in the appendix.

DOI 80: The use of the terms program and plan refer to aspects of the S&T effort for the LCA Plan. The S&T program is the component of the LCA that will direct scientific efforts to address uncertainties and develop new restoration approaches, while the S&T Plan specifies the structure, management, and general approach for the S&T Program.

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DOI 81 The Data Management Section focuses on ambiguous "tools" and does not mention the technologies that are essential and legally mandated, like FGDC compliant metadata, Quality Assurance/Quality Control (QA/QC), long-term maintenance, and system upgrades. Additionally, although a collaborative environment is mentioned throughout the text, there are no declarative statements that data management will be truly a distributed function. The importance of utilizing currently functioning database systems and historical datasets should also be mentioned. These systems and available datasets currently support restoration managers and areas accessible to the public.

Specific Comments

DOI 82 Page A-1, Section 1.0 Introduction; paragraph 1, line 2 - We suggest changing "The body of scientific knowledge and data for coastal Louisiana has…" to "The body of scientific data and knowledge for coastal Louisiana has…."

DOI 83 Page A-1, Section 1.0 Introduction; paragraph 1, line 5 - We suggest deleting "data and" from the sentence "However, certain aspects require increased data and monitoring, modeling, and research and experimentation to decrease uncertainties, especially in the area of predicting ecosystem response to the restoration projects." to read "However, certain aspects require increased monitoring, modeling, and research and experimentation to decrease uncertainties, especially in the area of predicting ecosystem response to the restoration projects."

DOI 84 Page A-1, Section 1.0 Introduction; paragraph 2, line 1 - We suggest changing the sentence "The LCA Program Execution Team requires a formal, clear, concise, and effective…" to "The LCA Program Execution Team (see section 4.2, LCA main report for definition) requires a formal, clear, concise, and effective…."

DOI 85 Page A-1, Section 1.0 Introduction; paragraph 2, line 9 - We suggest changing the sentence "This S&T Plan reaffirms the need for close and continuing coordination between the scientific community, state and Federal coastal resource managers, and the LCA Program Execution Team." to "This S&T Plan reaffirms the need for close and continuing coordination between the scientific community, state and Federal coastal resource managers, and the LCA Program Execution Team for integration of coastal protection activities occurring throughout coastal Louisiana."

DOI 86 Page A-2, Section 1.0 Introduction; Subsection 1.1, paragraph 1 - We suggest changing the following sentences: "The coastal areas have also been important for wintering waterfowl with several studies conducted to understand relationships between waterfowl use and habitat conditions. Oil and gas exploration and production have prompted numerous studies on subsurface geologic conditions (Wallace, 1966). Additional geologic conditions have been investigated to aid in understanding deltaic processes that have shaped the Louisiana coast (Fisk, 1944; Kolb and Van Lopik, 1958; Frazier, 1967; May, 1984; Smith et al., 1986; Penland et al., 1988; Dunbar et al., 1994; 1995). Studies on the Atchafalaya River and delta have also contributed to our understanding of deltaic processes (U.S. Army Corps of Engineers, 1951; Fisk, 1952; Shlemon, 1972; Wells and Roberts, 1984; Smith et al., 1986)." to "The coastal areas also have been important for wintering waterfowl with several studies conducted to understand relationships between waterfowl use and habitat conditions. Geologic conditions have been investigated to aid in understanding deltaic processes that have shaped the Louisiana coast (Fisk, 1944; Kolb and Van Lopik, 1958; Frazier, 1967; May, 1984; Smith et al., 1986; Penland et al., 1988; Dunbar et al., 1994; 1995). Studies on the Atchafalaya River and delta have also

DOI 81: Concur. These issues will be addressed as early actions by the S&T Office.

DOI 82: Concur. Text changed as suggested in the comment.

DOI 83: Concur. Text changed as suggested in the comment.

DOI 84: Concur. Reference to the Program Execution Team has been removed from this paragraph.

DOI 85: Concur. Reference to the Program Execution Team has been removed from this paragraph.

DOI 86: Concur. Text changed as suggested in the comment.

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DOI 86 (Continued)

contributed to our understanding of deltaic processes (U.S. Army Corps of Engineers, 1951 Fisk, 1952; Shlemon, 1972; Wells and Roberts, 1984; Smith et al., 1986). Oil and gas exploration and production have prompted additional studies on subsurface geologic condit (Wallace, 1966)."

DOI 87

Page A-2, Section 1.0 Introduction; Subsection 1.1, paragraph 2 - We suggest changing the following sentences: "…successfully meeting restoration goals would be necessary during ..... LCA Plan implementation. The LCA Project Delivery Team (PDT) reviewed annual adaptive management reports prepared to assess previously constructed CWPPRA projects. These efforts to identify lessons learned from the many CWPPRA projects, past and future, will also serve as a valuable assessment of what worked and why." to "…successfully meeting restoration goals would be necessary during later LCA Plan implementation. Adaptive management reports were prepared to assess previously constructed CWPPRA projects, identify lessons learned from the many CWPPRA projects, and serve as a valuable assessment of what worked and why."

DOI 88

Page A-2, Section 1.0 Introduction; Subsection 1.1, paragraph 3 - We suggest changing the sentence order of references to "(Dunbar et al., 1992, Barras et al., 1994, Barras et al., 2003)".

DOI 89

Page A-2, Section 1.0 Introduction; Subsection 1.1, paragraph 3 - Change "Federal and state statutes authorize and finance Louisiana coastal wetland restoration efforts on a large scale (Boesch, et al. 1994)." to "Federal and state statutes authorize and finance wetland restoration efforts throughout coastal Louisiana (Boesch, et al. 1994)."

DOI 90

Page A-3, Section 1.0 Introduction; Subsection 1.1, paragraph 4 - We suggest correcting the format of ending parentheses "(61.9 $km^{2)}$" to "(61.9 km^{2})".

DOI 91

Page A-3, Section 1.0 Introduction; Subsection 1.1, paragraph 5 - We suggest changing the following sentences: "Section 5.0 provides an approach for execution of the S&T Plan, and lists the general types of studies to be conducted and subsequent studies focused on issues of uncertainties. Section 5.0 will be continuously reviewed and updated annually, to assess implemented project outputs and to incorporate lessons learned using the adaptive management strategy to improve Program Management for subsequent years." to "Section 5.0 provides an approach for execution of the S&T Plan, and lists the general types of studies to be conducted and subsequent studies focused on reducing scientific uncertainties. Section 5.0 will be continuously reviewed and updated annually, to assess implemented project outputs and to incorporate lessons learned by using an adaptive management strategy to improve Program Management for subsequent years."

DOI 92

Page A-3, Section 1.0 Introduction; Subsection 1.2, paragraph 1 - Delete "(See Management Section in OCA Main Report for definition.)"

DOI 93

Page A-3, Section 1.0 Introduction; Subsection 1.2, paragraph 1 - We suggest changing the sentence "Such a process requires the development of key tools – such as development of baseline data and…" to "Such a process requires the development of key tools, such as sound baseline data and…."

DOI 94

Page A-4, Section 1.0 Introduction; Subsection 1.2, paragraph 2, bullet 5 - We suggest changi the sentence "Through scientific evaluations, assessments and peer reviews, assure science implemented, conducted or produced by the S&T Program meets an acceptable standard of quality, credibility, and integrity," to "Conduct scientific evaluations, assessments and peer

DOI 87: Concur. Clarification added that previous CWPPRA monitoring reports were reviewed during plan formulation.

DOI 88: Concur. Order of reference citations changed.

DOI 89: Concur. Text changed as suggested in the comment.

DOI 90: Concur. Text changed as suggested in the comment.

DOI 91: Concur. Text changed as suggested in the comment.

DOI 92: Concur. Text changed as suggested in the comment.

DOI 93: Concur. Text changed as suggested in the comment.

DOI 94: Concur. Text changed as suggested in the comment.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 94 (Continued)

reviews to assure that the science implemented, conducted or produced by the S&T Program meets an acceptable standard of quality, credibility, and integrity."

DOI 95

Page A-5, Section 1.0 Introduction; Subsection 1.2, paragraph 3 - We suggest changing the sentence "The intent of this S&T Plan is to provide a foundation, organizational structure and processes for continual dialog among scientists, the Program Management Team, and the Program Execution Team," to "In performing these activities, the S & T Program should maintain continual dialog among scientists, the Program Management Team, and the Program Execution Team."

DOI 96

Page A-5, Section 1.0 Introduction; Subsection 1.3, bullet 4 - Delete the space before "Minimize uncertainties about the system or system components…."

DOI 97

Page A-6, Section 1.3.1.1., Science Information Needs - The heading for section 1.3.1 is "S&T Program Structure," but the first sentence addresses the 5 primary components in the "S&T PLAN". Is this intended? We recommend that this section also include a brief discussion of how the LCA Task Force will participate, along with the Program Management and Execution Teams, in prioritizing the science needs and the work of the LCA S&T program.

DOI 98

Page A-7, Section 1.0 Introduction; Subsection 1.3.1.2, paragraph 1 - Add "Coastwide" in the sentence "…ongoing monitoring systems like the CWPPRA Reference Monitoring System for Wetlands as appropriate." to read "…ongoing monitoring systems like the CWPPRA Coastwide Reference Monitoring System for Wetlands as appropriate."

DOI 99

Page A-7, Section 1.0 Introduction; Subsection 1.3.1.4, paragraph 1 - This section only describes AEAM, NOT modeling as the section title suggests. Suggest modifying the section so that it agrees with the section title.

DOI 100

Page A-7, Section 1.0 Introduction; Subsection 1.3.1.4, paragraph 1 - Delete the sentence "The efficacy is determined through monitoring and other means to improve the response of the system (Holling and Gunderson, 2002)."

DOI 101

Page A-9, Section 1.0 Introduction; Subsection 1.4, paragraph 2 - This is the third instance that this information is provided. We recommend deleting the entire paragraph "This S&T Plan provides a strategy…resources needed to overcome those gaps and limitations." to eliminate this redundancy.

DOI 102

Page A-10, Section 1.0 Introduction; Subsection 1.5.1, paragraph 1 - The PBSJ report should be cited at the end of the sentence "Therefore, an early step taken to construct the S&T Plan was to conduct a workshop for scientists from Louisiana and across the Nation to provide suggestions that could be used by the Corps and State to identify data gaps and enhance development of a science-based Adaptive-Management Decision-Support System (add citation here)."

DOI 103

Page A-10, Section 1.0 Introduction; Subsection 1.5.1, paragraph 1 - Remove the dash between "adaptive" and "management".

DOI 104

Pages A-11 and A-12, Section 1.0 Introduction; Subsection 1.6, paragraph 1-2 - Much of these two paragraphs are redundant with paragraph 2, page A-3. We suggest moving subsection 1.6 paragraphs to the end of subsection 1.1.

DOI 95: Concur. Text changed as suggested in the comment.

DOI 96: Concur. Text changed as suggested in the comment.

DOI 97: The roles of the LCA Task Force, PM, and PET are explained in the LCA Plan.

DOI 98: Concur. Text changed as suggested in the comment.

DOI 99: Concur. Title changed to refer to AEAM.

DOI 100: Concur. Text changed as suggested in the comment.

DOI 101: Concur. Paragraph deleted.

DOI 102: This statement does not need a citation, however, the date of the workshop has been included in the text.

DOI 103: Concur. Adaptive Management changed to AEAM.

DOI 104: Concur. This section has been moved to an earlier position in the document.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 105 Page A-13, Section 2.0 AEAM; Subsection 2.1, paragraph 3 - We suggest changing the sentence "At a project level, the Caemarvon Freshwater Diversion has incorporated…." to "At a project level, the Caemarvon Freshwater Diversion, which is located in southeast Louisiana, has incorporated…."

DOI 106 Page A-14, Section 2.0 AEAM; Subsection 2.1, figure A-2.1 - We suggest changing the heading "Science Office" to "S&T Office."

DOI 107 Page A-14, Section 2.0 AEAM; Subsection 2.1, figure A-2.1 - We suggest replacing the comma with a semi-colon to read "Monitor outcomes of changes; Repeat cycle as required."

DOI 108 Page A-15, Section 2.0 AEAM; Subsection 2.1, paragraph 7 - We suggest changing the sentence to read, "An AEAM framework would be used to help guide restoration actions toward a sustainable condition. Several components within an AEAM framework include: goals and objectives, conceptual models, performance measures, role of targets, project communication frameworks, and decision-making approaches. A summary of selected AEAM elements is discussed below."

DOI 109 Page A-18, Section 2.0 AEAM; Subsection 2.1.1.5, paragraph 1 - Delete the last sentence "Prior studies would not be repeated due to the lack of this important element of AEAM."

DOI 110 Page A-20, Section 3.0 Science and Technology Program Implementation; Subsection 3.2.1, paragraph 1 - For consistency, we suggest using a full set of parentheses around numbers in the sentence "For example, funds could be used to: (1) develop... and (2) fund coastal restoration…."

DOI 111 Page A-20, Section 3.0 Science and Technology Program Implementation; Subsection 3.2.1.1, paragraph 1 - We suggest changing "request" to "requests" in the sentence "Program budget requests are prepared…."

DOI 112 Page A-24, Section 3.0 Science and Technology Program Implementation; Subsection 3.3, paragraph 1 - We suggest adding a sentence to read, "…for the Program Execution Team, and it must maintain regular and frequent communication with those planning, designing and constructing projects. A seamless integration of monitoring, modeling, and research activities and personnel is critical to the success of the S&T Plan and will remain a high priority of the S&T Office. Several related functions are discussed below."

DOI 113 Page A-24, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.1.1, paragraph 2 - We suggest changing "mathematical" to "numerical" when describing models. "Three broad categories of models are possible: conceptual, physical, and numerical. Conceptual models…a clear picture of alternatives under discussion. Numerical models can be used as a surrogate…."

DOI 114 Page A-26, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.1.2, paragraph 2 - We suggest changing "Models would be developed by the S&T Program jointly with the Program Execution Team to ensure product utility, and the Program Execution Team would use those models." to read "Models would be developed by the S&T Program jointly with the Program Execution Team to ensure product utility and utilization by the Program Execution Team."

DOI 105: Concur. Text changed as suggested in the comment.

DOI 106: Concur. Figure changed.

DOI 107: Concur. Figure changed.

DOI 108: Concur. Text changed as suggested in the comment.

DOI 109: Concur. The last sentence of this paragraph was deleted.

DOI 110: Concur. Text changed as suggested in the comment.

DOI 111: Concur. Text changed as suggested in the comment.

DOI 112: Concur. Text changed as suggested in the comment.

DOI 113: The term "mathematical" is used to describe models because this term is more familiar to the public, even though solution of equation sets for simulation of processes is usually referred to as numerical modeling.

DOI 114: Concur. The text has been changed to clarify roles in model development and execution.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 115 Page A-26, Section 3.3.1.2. The LCA Approach, first paragraph on page - In addition to their capability to aid in project design efforts, the Service also recommends that this paragraph be revised to indicate that environmental models must also be capable of providing results that will meet agency requirements for compliance with NEPA and the Fish and Wildlife Coordination Act. The Service will participate with the Program Execution Team to ensure that priority is placed on further developing and refining of environmental models and their associated outputs to meet both the needs of Service and the LCA restoration goals.

DOI 116 Page A-26, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.2, paragraph 1 - We suggest removing the comma after the word "focused", so that the sentence reads "…only through effective data acquisition, monitoring, and focused applied research can…."

DOI 117 Page A-26, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.2, paragraph 1 - We suggest changing the word "predictive" to "numerical", so that the sentence reads "…improve conceptual and numerical models and working hypotheses."

DOI 118 Page A-28, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.3.1, paragraph 1 - Change the last sentence to read "A well-conceived computing and information framework is key to this success and should be constructed by appropriate scientists and resource managers in conjunction with information technology (IT) personnel."

DOI 119 Page A-29, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.3.2, bullet 6 - Change "Science and Technology program" to "S&T Program".

DOI 120 Page A-29, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.3.2 Data Management, Computing and Information Framework, Data Centers - Partnership collaboration is not stressed in this section, although most of the data does not reside at the USACE. The USGS, for instance, has a long history of data collection and management and the Department recommends stressing partnerships with existing groups.

The Department recommends that data-management policy and statements encompass a larger group than the USACOE, since considerable datasets are collected and managed by other agencies, such as the USGS.

DOI 121 Page A-30, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.3.2 Data Management, Computing and Information Framework, Data Centers, lines 1 and 2 - A data-management framework group/committee will be mandatory to develop a large cooperative program. There is no way that one person or one agency will be capable of addressing all the management needs. The Department recommends the formation of the Data Management group.

DOI 122 Page A-30, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.4.1, paragraphs 2 and 3 - We suggest changing the words "Science Plan" to "S&T Plan;"

DOI 123 Page A-35, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.1, paragraph 1 - We suggest changing the words "Science and Technology" in the first sentence to "S&T."

DOI 124 Page A-35, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.1, paragraph 1 - The "LCA PDT" has not been defined. We suggest changing the following: "The LCA PDT recognizes those uncertainties and has formulated a plan with this recognition. Largely based on

DOI 115: Modeling results will be used for all appropriate and defensible purposes, and interagency coordination will be an important component of model development and use.

DOI 116: Concur. Text changed as suggested in the comment.

DOI 117: Concur. Text changed to eliminate the term "predictive."

DOI 118: Concur. Text changed as suggested in the comment.

DOI 119: Concur. Text changed as suggested in the comment.

DOI 120: Comment noted. The appendix specifies that databases will be constructed by appropriate scientists and resource managers.

DOI 121: Comment noted.

DOI 122: Concur. Text changed as suggested in the comment.

DOI 123: Concur. Text changed as suggested in the comment.

DOI 124: Concur. Text changed as suggested in the comment.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 124 (Continued)

knowledge gained from research in the coastal zone and restoration projects constructed in the past 10 years under CWPPRA, the LCA PDT has identified the number of restoration features…" to read, "The LCA plan recognizes those uncertainties and has formulated a plan with this recognition. Largely based on knowledge gained from research in the coastal zone and restoration projects constructed in the past 10 years under CWPPRA, the LCA plan identifies the number of restoration features…."

DOI 125

Page A-35, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1, paragraph 1 - We suggest changing "Continued improvement of tools and networks to better document these baseline conditions would allow for more detailed and coast wide monitoring and assessment, which would better support program-level, as well as project-level, adaptive management." to read, "The expansion and evolution of new and existing tools and networks will provide additional baseline data throughout coastal Louisiana for more detailed program-level and project-level assessments."

DOI 126

Page A-36, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 2 We recommend indenting the paragraph to be consistent with other formatting.

DOI 127

Page A-36, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 3 We suggest changing "…closely with the National Geodetic Survey (NGS) to establish a network of NGS High Accuracy…" to read "…closely with the National Geodetic Survey (NGS) to establish High Accuracy…."

DOI 128

Page A-36, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 3 Spell out "National Oceanic and Atmospheric Administration (NOAA)."

DOI 129

Page A-36, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 4 We suggest changing "…processes contributing to site-specific areas across the coast and rates of subsidence." to "…processes contributing to site-specific rates of subsidence across the coast."

DOI 130

Page A-37, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 4 Change "coastal" to "coast" "…bathymetry of segments of the coast."

DOI 131

Page A-37, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.4, paragraph 1 Spell out "Louisiana Department of Natural Resources (LDNR)" and "Minerals Management Service (MMS)".

DOI 132

Page A-38, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.5, paragraph 1 We suggest revising the sentence so that it reads "Through CWPPRA, a Coastwide Reference Monitoring System (CRMS) for wetlands is being established…."

DOI 133

Page A-38, Section 4.0 Scientific and Technology Uncertainties; Heading 4.2.3 - We suggest changing the sentence to read, "Uncertainties about our Scientific Understanding of Coastal Ecological Processes…"

DOI 134

Page A-41, Section 4.0 Scientific and Technology Uncertainties; paragraphs 2, 5, and 6 - We suggest changing the wording, "Science and Technology" to "S&T."

DOI 125: Concur. Text changed as suggested in the comment.

DOI 126: Concur. Text changed as suggested in the comment.

DOI 127: Concur. Text changed as suggested in the comment.

DOI 128: Concur. Text changed as suggested in the comment.

DOI 129: Concur. Text changed as suggested in the comment.

DOI 130: Concur. Text changed as suggested in the comment.

DOI 131: Concur. Text changed as suggested in the comment.

DOI 132: Concur. Text changed as suggested in the comment.

DOI 133: Concur. Text changed as suggested in the comment.

DOI 134: Concur. Text changed as suggested in the comment.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 135 Page A-42, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.3.5, paragraph 1 - The last sentence should read "…significance of the uncertainties relative to the advancement of the LCA Program [Add] in coordination with Program Management and the Program Execution Team."

DOI 136 Page A-42, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.3.6, paragraph 3 - We suggest changing the sentence to read "…projects currently in the engineering and design phase under CWPPRA, as well as existing restoration projects may be examined…."

DOI 137 Page A-46, Section 5.0 LCA Science and Technology Agenda; Subsection 5.2, paragraph 2 - We suggest changing the sentence "Moves to focus the S&T Program and would be updates less often…" to "S&T Program focus would be updated less often…."

DOI 138 Page A-47, 5.0 LCA Science and Technology Agenda; Subsection 5.2.2, paragraph 1 - We suggest changing the sentence to read "…relevant to the LCA Plan are identified below; they may be used to reduce…."

DOI 139 Page A-47, 5.0 LCA Science and Technology Agenda; Subsection 5.2.2, paragraph 2, line 1-2 - We suggest changing the sentence "…implemented early in the 5-year program cycle" to "…implemented early in the 3-year program cycle."

DOI 140 Page A-47, 5.0 LCA Science and Technology Agenda; Subsection 5.2.2, paragraph 2 - Change numbered items "8)", "9)", and "10)" to "1)", "2)", and "3)."

DOI 141 Page A-48, 5.0 LCA Science and Technology Agenda; Subsection 5.2.3, paragraph 2, line 8 - Spell out "CE" when first introduced in text.

DOI 142 Page A-55, 5.0 LCA Science and Technology Agenda; Subsection 5.4.1.1, paragraph 1 - Change "AM" to "AEAM."

DOI 143 Page A-58, 6.0 Literature Cited - Add two GAO report references GAO-03-345 and GAO-03-999T.

Main Report, Appendix C – Hydrodynamic and Ecological Modeling

General Comments

DOI 144 The subject modeling system is a vitally needed tool for assessing the sub-province-level effects of multiple restoration projects, especially those involving diversions. As noted above, however, future-without-project habitat type acreage predictions at year 10 differ significantly from actual year 0 conditions in several cases. Those differences strongly suggest that additional forecasting improvements are needed. Given concerns about possible diversion-related over-freshening, accurate salinity and habitat type predictions will be needed to assess project effects and maintain public support for critically important restoration features. The Department, therefore, recommends that refinement and improvement of salinity and habitat type forecasting models and methodologies be completed as one of the highest priorities of the S&T program. Ideally, those model refinements and improvements should be completed and validated prior to the final design, assessment, or implementation of the first LCA projects.

DOI 135: Concur. Text changed as suggested in the comment.

DOI 136: Concur. Text changed as suggested in the comment.

DOI 137: Concur. Text changed as suggested in the comment.

DOI 138: Concur. Text changed as suggested in the comment.

DOI 139: Concur. Text changed as suggested in the comment.

DOI 140: Concur. Text changed as suggested in the comment.

DOI 141: Concur. Text changed as suggested in the comment.

DOI 142: Concur. Text changed as suggested in the comment.

DOI 143: Concur. Text changed as suggested in the comment.

DOI 144: Model advancement is vital to the future planning activities and implementation of the LCA Plan. For this reason, LDNR continues to fund the Coastal Louisiana Ecosystem Assessment and Restoration (CLEAR) program in order to improve existing models and to build new models that will assist in project-level benefits forecasting. These activities will be an integral part of the S&T Program.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

Thank you for the opportunity to comment on the draft environmental documents for this important effort. If you have questions or need further information, please contact us at (505) 563-3572.

Sincerely,

Stephen R. Spencer, Ph.D.
Regional Environmental Officer

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
P.O. Box 26567 (MC-9)
Albuquerque, New Mexico 87125-6567

TAKE PRIDE IN AMERICA

August 23, 2004

ER 04/0500

Dr. William P. Klein, Jr.
Mr. Tim Axtman
U.S. Army Corps of Engineers
New Orleans District
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Sirs:

The U.S. Department of the Interior (Department) has reviewed the July 2004 Louisiana Coastal Area Ecosystem Restoration Study (LCA) Draft Programmatic Environmental Impact Statement (DPEIS) and Main Report. In this regard, the following comments are provided for your use as you prepare the final documents.

The LCA study was undertaken in response to the continuing deterioration and loss of Louisiana's vitally important coastal wetlands ecosystem; absent substantial efforts to address those losses, more than 500 square miles of that ecosystem are projected to be lost over the next 50 years. The Louisiana coastal ecosystem supports nationally significant fish and wildlife resources that include migratory birds, inter-jurisdictional fishes, threatened and endangered species, and 10 National Wildlife Refuges. Louisiana's coastal wetlands and associated barrier islands also provide other functional ecological values, such as storm-buffering, water quality improvement, and protection of socially and economically important infrastructure.

The Department has and will continue to support LCA development by participating in all levels of the evolving LCA management structure. We appreciate and commend the cooperative efforts of the Corps of Engineers and other involved Federal agencies; the State of Louisiana (Governor's Office, Louisiana Department of Natural Resources, and other involved State agencies); various academic institutions and personnel; and private groups and individuals who have worked together to address this nationally significant issue. The Department has also consistently supported the pioneering partnership embodied by the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force in their unique efforts to address the loss of coastal Louisiana and its wetlands. The Main Report and the DPEIS substantiate that the scope of the problem is so great and the solutions to it are so complex and expansive that the combined and closely coordinated efforts of both CWPPRA and the LCA will be required to successfully address it.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

In view of the consequences envisioned in the future without the LCA, the Department, with the attached suggestions and comments, strongly supports implementation of the proposed LCA near-term TSP as the next key step toward comprehensively and sustainably restoring Louisiana's coastal ecosystem.

Draft Programmatic Environmental Impact Statement

General Comments

DOI 01 The Draft Programmatic Environmental Impact Statement (DPEIS) is well-written, adequately describes the significant fish and wildlife resources in the project area, and discloses the anticipated programmatic-level impacts of the TSP on those resources. Because it is a programmatic document, the Department recognizes that individual project impacts must be further evaluated and disclosed in subsequent, project-specific National Environmental Policy Act of 1970 (NEPA) compliance documents that will "tier-off" from the PEIS. Future LCA features or impacts that do not tier from the final PEIS will necessarily require revision of that document for consistency with current NEPA guidance.

DOI 02 The Fish and Wildlife Service (FWS) has also reviewed the biological assessment (BA) presented in Appendix B1 of the DPEIS in accordance with provisions of the Endangered Species Act (ESA) of 1973. As noted in the specific comments pertaining to that BA, the FWS concurs with the Corps' programmatic determination that the TSP is not "likely to adversely affect" any of the currently listed threatened and endangered species or designated critical habitat, for which the FWS has consultative jurisdiction. Consultations such as this one, involving a Federal agency proposal to adopt or approve a management plan or strategy that would be used to guide the development and implementation of future projects, are termed "programmatic consultations." Several courts have ruled that the decision to adopt plans or strategies that guide the implementation of future individual actions, as well as each future individual action itself, must fulfill the requirements for consultation under Section 7 of the ESA. Accordingly, while potential impacts associated with the proposed Louisiana Coastal Area Ecosystem Restoration Study TSP have been addressed at the programmatic level, an additional Biological Assessment/Biological Evaluation should be prepared when individual projects tiered to that plan/PEIS may affect a Federally listed threatened or endangered species and/or adversely affect designated critical habitats.

Specific Comments

DOI 03 Page 1-15, Section 1.5.2.1.2, Loss Of Coastal Geomorphology - The first paragraph states that degradation of interior geomorphologic structures adversely affects the entire system. This paragraph should be expanded in the final PEIS to identify and define interior geomorphic structures, such as barrier inlands, interior bay islands, main land fringe, etc., briefly explain their functions, and describe the effects on interior marshes when those structures are lost.

DOI 04 Page 1-23, Section 1.5.2.1.9.2, Hurricane And Louisiana Barrier Shorelines/Islands - In citing the 1980-to-2002 loss of Shell Island, the text may inadvertently lead one to assume that all of that loss was due to storms. This text should be revised to indicate that those losses may also be attributable to other causes such as subsidence, interruption of deltaic processes, and disruption of the associated sand or sediment supply. The penultimate sentence may also cause confusion and should be corrected to read, "If coastal land loss and erosion of Louisiana's barrier

DOI 01: Comment noted. All subsequent LCA Plan related restoration features will be compliant with the NEPA, as well as any other statutory authorities, including laws, regulations, Executive Orders, policies, rules, and guidance.

DOI 02: The District would continue to work closely with those agencies with jurisdictional oversight (the USFWS and the NMFS) with regard to consultation requirements under Section 7 of the Endangered Species Act. The LCA planning team would aggressively work to avoid, minimize, rectify, reduce or eliminate the impact, or if unavoidable, compensate for the impact, in this order as specified in 40 CFR Part 1508.20. An additional Biological Assessment/Biological Evaluation would be prepared when individual projects tiered to the LCA Plan and FPEIS may affect a Federally listed threatened or endangered species and/or adversely affect designated critical habitats.

DOI 03: Additional discussion on the identification and definition of interior geomorphic structures has been included in the FPEIS. The following text has been added to the FPEIS:

"The geomorphic structure of the estuary is degraded. Barrier islands, distributary natural levees, and lake rims represent the majority of natural features above marsh elevation in the coastal area. As these features subside and/or erode, the rate at which other degenerative processes work is increased. These protective elements of the estuarine framework are critical to the stability of the system as a whole.

Barrier islands are an important element of the geomorphic framework of the estuary. Barrier islands separate the gulf from the back-barrier estuarine environment helping to maintain the salinity gradients important to estuarine species. As they erode and are breached, marine processes invade the interior bays and marshes and land loss accelerates. Barrier islands also serve as valuable storm buffers protecting communities, industry, and their associated infrastructure from storm surges.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 03 (Continued): Like barrier islands, distributary natural levees, and lake rims are critical geomorphic features. They protect interior wetlands from wave and current action reducing land loss and help to reduce tidal surge during storm events. They are also responsible for establishing much of the natural hydrology within the coastal system. These features have subsided and eroded to a point where there effectiveness is severely reduced. It is important to restore these geomorphic features so that the benefits they provide (storm surge reduction, hydrology control, erosion control, etc.) can be maximized.

DOI 04: Text has been revised accordingly with "For example, between 1980 and 2002, Shell Island, which protects a portion of the Barataria Basin, lost approximately 101.5 feet per year (Conner et. al. 2004) due to the effects of storm erosion, relative sea level rise, and a reduction in sediment supply and "If the erosion of Louisiana's barrier shoreline is not addressed, inland cities will become the front line of defense for a hurricanes high wind and storm surge."

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 04 (Continued)

shorelines is not halted, current inland cities may be directly exposed to hurricanes' high winds and storm surges."

DOI 05

Page 1-27, Section 1.5.2.2.6, Oil and Gas Infrastructure - This section duplicates information previously presented in Section 1.5.2.2.4 - Construction of Canals and Dredged Material Banks That Disrupt The Internal Hydrology of the Delta. In addition, a possible discrepancy between the estimated 9,500 miles of oil and gas pipelines referenced in Section 1.5.2.2.6, and the earlier estimate of 9,300 miles of canals for navigation, drainage, and oil and gas development referenced in Section 1.5.2.2.4, should be corrected in the final PEIS.

DOI 06

Page 1-43, Section 1.9, Prior Studies, Reports and Existing Water Resources Projects – The reference to attachment 2 at the end of the first paragraph is apparently in error; we could not find that attachment, although it may be similar to attachment 1 of the Main Report.

DOI 07

Page 2-40, Section 2.3.6.1.3, Subprovince 3 Feature Descriptions - The title for the third feature "Convey Atchafalaya River water to Terrebonne marshes . . . ." should be underlined and followed with a colon for consistency. The last sentence of that project description should also be corrected to read "This feature also includes increasing freshwater supply through repairing banks along the GIWW, enlarging constrictions in the GIWW, and diverting additional Atchafalaya River freshwater through the Avoca Island Levee (into the Bayou Chene/GIWW system).

DOI 08

Page 2-65, Section 2.5.2.2, Subprovince 3 Features and Opportunities Having Limited or No "Critical Needs Criteria" Value - The CWPPRA Wetland Value Assessment for the Blue Hammock Bayou Project determined that the project would benefit a 43,000-acre area and would yield a relatively high 600 average annual habitat units. Because of substantial project-related salinity reductions through riverine freshwater introduction, the project would potentially impact all the private oyster leases and the State oyster seedgrounds located within Lake Mechant. Hence, the statement that this project ". . . does not appear to produce significant enough changes . . ." conflicts with the previous CWPPRA evaluation. Therefore, this project should be removed from the list of projects that do not sufficiently meet ecological needs, and it should be added to the list of projects for which there is insufficient science and technology understanding. (This comment also applies to the Main Report, Page MR-140, first paragraph).

DOI 09

Page 2-81, Section 2.8.1.2, Assumptions and Rules and Table 2-14 Sequenced PBMO Components - We recommend that further explanation/clarification regarding why some composite groups were prioritized as a group, while other composite groups were separated into individual projects for sequencing, be provided in the final PEIS. That document should also include a description of how the sequencing rules were used to prioritize implementation of features, and the associated reasoning, like that provided in Section 2.5 which explains why features meet significant "Critical Needs Criteria" or not.

DOI 10

Page 2-82, Section 2.8.1.4, Implementation Scheduling Evaluation - The last paragraph states that the Penchant Basin Restoration Plan was not considered to be implementable within 10 years, yet that project is presently nearing completion of extensive hydrologic modeling evaluations and final design, preparatory to construction. The Small Bayou Lafourche Reintroduction project has also undergone considerable engineering work; however, the text on Page 2-102 indicates that, because ". . . significant design efforts are already underway," that project is recommended for programmatic authorization. We recommend that this apparent inconsistency be more fully explained in the final PEIS. The sequencing approach for projects

DOI 05: Duplicative language has been removed, and inconsistencies regarding estimated miles of oil and gas pipelines have been corrected.

DOI 06: The text has been revised to state that Attachment 2 of the Main Report lists prior studies, reports and existing water projects. Attachment 1 of the Main Report lists relevant authorizations for coastal restoration efforts.

DOI 07: Editorial corrections have been made to the FPEIS.

DOI 08: While technical information developed under the CWPPRA program is acknowledged as supportive of features being considered, whenever available, the use of outputs commonly developed through the LCA Plan effort dictated the identification of the most effective solutions. In this case, the LCA Plan analysis did, in fact, identify the Blue Hammock Bayou feature as a component of an effective coast wide alternative. In the assessment of those features for consideration as possible critical near-term actions, the Blue Hammock Bayou was also deemed to meet the implementation criteria for inclusion. However, in subsequent discussions within the PDT there was some indication that uncertainty regarding the local hydrology may need to be addressed. The criterion of restoring (or mimicking) fundamentally impaired deltaic function through river reintroduction is a key in this instance. While the proposed action should be effective, the function does appear to be impaired. The deltaic function, the introduction of freshwater through backwater hydrologic effects, is ongoing. A natural consequence of this effect that would also expected in the future is the depositional reduction of water bodies under this backwater effect. As a result of these considerations, the Blue Hammock Bayou feature has been recategorized to reflect this uncertainty and has potential for resolution through a demonstration project. Additional text has been added to the Main Report and the FPEIS.

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DOI 09: Additional language regarding sequencing of projects and the formation of composite groups, referred to as "restoration opportunities" in the Main Report and FPEIS, has been included in the final report.

DOI 10: Currently the features identified for a conditional or Congressional Authorization have a significant level of design development. In addition NEPA (EIS) documentation development has already been initiated for these features. The initiation of NEPA compliance is an indication that a critical assessment of alternative actions, which would be a required product for completion of a feasibility-level decision document under the LCA Program, is in progress and being documented. While the Penchant Basin plan also has a high level of design information, no NEPA compliance effort has been initiated. As a result, there is a less confidence that the Penchant Basin feature could be advanced to the point of construction approval prior to there being another WRDA act considered by Congress, and therefore no need for conditional or Congressional Authorization. It appears that the continued consideration and approval of this feature under the CWPPRA program would result in its most rapid implementation.

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DOI 10 (Continued)

on which significant planning/engineering work has been completed should be carefully reviewed and revised as appropriate to improve sequencing consistency (see related comments for the Main Report).

DOI 11

Page 2-98, Section 2.9.2.1.3, Barataria Basin Barrier Shoreline Restoration - The middle of the third paragraph references attachment 4 which we could not locate; that reference should be corrected in the final PEIS. Although the third sentence of the fourth paragraph states, "Material for marsh creation would be pumped from interior open-water sites . . .", other descriptions indicate that sediment would come from exterior sites; that discrepancy should also be clarified or corrected in the final PEIS.

Page 2-106, Section 2.9.2.1.5, Medium Diversion with Dedicated Dredging at Myrtle Grove - We recommend that the description of the WVA methodology be deleted from this project description in the final PEIS.

DOI 12

DOI 12

Page 3-34, Chapter 3 Affected Environment; Section 3.7.2 Existing Conditions - The LCA will affect nearly 1.1 million acres of "swamp/wetland forest", the largest area of all wetland habitats. A larger focus should be placed on monitoring (for example, CRMS) in these habitats to understand, or avoid, habitat switching. Likewise, this acreage estimate is a little misleading since much of the acreage is far enough north to avoid the major habitat degradation vectors along the extreme coast, such as salinity and increased flooding; however, it is the remnant forests that need to be shielded from habitat switching. Influences of a diversion should be sufficient. It would benefit LCA to identify all remnant, degraded baldcypress stands and assign a diversion outflow specifically to each stand (as best as the current LCA plan will allow). This would be a similar approach to all remnant stands as taken for Maurepas, however, without assigning dedicated diversions.

DOI 13

Page 3-58, Chapter 3 Affected Environment; Section 3.14 Hydrology, Subsection 3.14.3.1 Historic and Existing Conditions, paragraph 1 - The last sentence would be improved by adding: "In southwestern Louisiana" large amounts of fresh groundwater are generally available, and groundwater is used for most purposes.

DOI 14

Page 3-58, Chapter 3 Affected Environment; Section 3.14 Hydrology, Subsection 3.14.3.1 Historic and Existing Conditions, paragraph 2 - Paragraph 2 states "The Mississippi River and some of its distributaries were the largest sources of surface water….," but it doesn't indicate when this was true. Insert "During 2000," at the beginning of the paragraph, or swap the positions of the 2nd and 3rd paragraphs so that the reader will understand that the withdrawal information in the second paragraph is from 2000.

DOI 15

Page 3-58, Chapter 3 Affected Environment; Subsection Section 3.14.4.1 Historic and Existing Conditions, paragraph 2, lines 1-5 - The first sentence of the second paragraph in this section states **Section 3.14 Hydrology** that "Groundwater is at or near the surface …." The USGS suggests changing "Groundwater" to "The water table." Although ground water is found at relatively shallow depths in this area, statements made in the rest of the paragraph indicate that the author was referring to the water table in unconfined aquifers rather than ground water in confined aquifers that occur at deeper depths and are not hydraulically connected to surface-water bodies. In the second sentence, suggest changing "ground-water level" to "elevation of the water table."

DOI 11: The correct reference for the attachment has been included in the FPEIS. The sentence regarding interior borrow sites has been deleted; priority borrow sites are from exterior sites. The WVA methodology has been deleted from the Myrtle Grove feature description.

DOI 12: Implementation of certain components of the LCA Plan would re-introduce freshwater, sediment, and nutrients to "swamp/wetland forest" in order to restore and protect remnant forest stands, particularly within portions of the Maurepas Swamp and the area surrounding Lac Des Allemands (Subprovinces 1 and 2). It is not the intention to encourage, or indirectly contribute to, habitat switching in these essential habitats. Monitoring efforts under the S&T Program would, among other things, identify the ecosystem responses as a result of the implementation of the LCA Plan, including responses from swamp/wetland forest habitats. The LCA Plan does not identify every forest stand in the coastal zone and does not recommend individual restoration features for each of these wetland forest habitats; however, over the course of implementation and during continued research and monitoring efforts under the S&T Program, new restoration features can be developed to respond to critical needs of the ecosystem, including those identified in swamp/wetland forest habitats. During the five-year review and update of the LCA Plan, new features could be added.

DOI 13: Text has been revised accordingly in the FPEIS.

DOI 14: Text has been revised in the FPEIS to include a time reference to the statements in question.

DOI 15: Text has been revised accordingly in the FPEIS.

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DOI 16 — Page 3-60, Chapter 3 Affected Environment; Section 3.14 Hydrology; Section 3.14.4.1 Historic and Existing Conditions, lines 2-3 - A line break is needed between the first and second paragraphs on the page. "No major sources of fresh ground water ...." starts a new paragraph.

DOI 17 — Page 4-31, Section 4.4.3, Restoration Opportunities – Indirect Impacts - The text should be revised to indicate that other islands within the barrier island chain may also receive indirect benefits from the introduction of sand via littoral drift from newly rebuilt islands.

DOI 18 — Page 4-34, Chapter 4 Environmental Consequences; Section 4.6.1 Future Without-Project Conditions-The No Action Alternative, table 4-3 - The caption creates confusion – What is meant by "Future?" Is this a 20-, 50-, 100- year projection? The acreage is without context – larger or smaller than present. Please revise for clarity.

DOI 19 — Page 4-46, Chapter 4 Environmental Consequences; Section 4.6.5, Invasive Species - There are two invasive species elements of concern to this section that need to be addressed. First, Chinese tallow (*Sapium sebiferum*) is and will remain a major part of all post-rehabilitation plans described in the LCA. Full ecosystem "restoration" will not be attained until this species is controlled or at least managed as a less dominant entity.

The second element includes species, such as black willow (*Salix nigra*). Although *Salix nigra* is a native species to the southeastern U.S., it probably will be considered as an invasive species during many restoration programs. Cypress and water tupelo (*Nyssa aquatica*) should eventually take hold in some locations, but restoration will be greatly augmented with active measures to plant, monitor, and nurse ecosystems in light of invasive species concerns.

DOI 20 — Page 4-67, Section 4.12, Threatened and Endangered Species - Please refer to our general comment above concerning threatened and endangered species, as well as our specific comments on the BA contained in Appendix B1. We also recommend that this section be revised in the final PEIS to include the Corp's summary "not likely to adversely affect" determinations for the TSP.

DOI 21 — Page 4-70, Section 4.13.1.3, Restoration Opportunities – Indirect Impacts - The first paragraph references California Bay and Bayou Lamoque as diversion project receiving areas, however, diversions into those areas are not part of the TSP; the PEIS should be revised accordingly.

DOI 22 — Page 4-72, Section 4.13.2.3, Restoration Opportunities – Indirect Impacts - Diversions into American and California Bays are not part of the TSP; the PEIS should be revised accordingly.

DOI 23 — Page 4-80, Chapter 4 Environmental Consequences, Section 4.14 Water Quality Resources, Subsection 4.14.2 Comparison of Near-Term Restoration Opportunities, second full paragraph, last sentence - "The concentrations of such introduced compounds would not, in the best professional judgment of the USGS, be sufficient to exceed alert levels, or harm the environment."

The above quoted sentence is only true of the streambed sediments in the main channel of the Mississippi River; however, there is substantial contamination in the streambed sediments of some of the other major water bodies, such as the Bayou Lafourche and the Calcasieu River, in the Louisiana Coastal Area. The Department recommends that the quoted sentence be revised to reflect the above stated qualifying statements. Additionally, the revised sentence should be cited as a written communication as follows:

DOI 16: Text has been revised accordingly in the FPEIS.

DOI 17: Additional language has been included to the FPEIS to state that other barrier islands within the barrier island system may also receive indirect benefits from the introduction of sand via littoral drift from newly rebuilt islands.

DOI 18: Table 4-3, the Future-Without Project time frame, is the same as the Future With Project time frame-50-year project life.

DOI 19: Additional text has been incorporated in the FPEIS discussion on invasive species to include the Chinese tallow and the black willow.

DOI 20: Text has been revised: "Hence, based upon the potential direct, indirect, and cumulative impacts, implementing ALT B/ALT C/TSP is not likely to adversely affect threatened or endangered species or their critical habitat. In addition, the response to DOI 02 has also been included in the first paragraph of this section.

DOI 21: Text has been revised accordingly.

DOI 22: Text has been revised accordingly.

DOI 23: The paragraph will be replaced with the following: "The reintroduction of streambed sediments into the LCA Plan area may add some contaminants; these would include primarily trace metals and hydrophobic organic compounds from Mississippi River streambed sediments. Trace metals and hydrophobic organic compounds such as pyrenes, hexachlorobenzene, and chlorinated hydrocarbons such as DDT, or its degradates, would adsorb onto sediment particles or the organic coatings of sediment particles (USGS written correspondence). The types of contaminants potentially released would vary with project location and be site specific.

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DOI 23 (Continued): As mandated by Section 404(b)(1) of the Clean Water Act, CEMVN is required to demonstrate that the reintroduction of sediments into a proposed study area, "will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern". USGS citation: C.R. Demas and D.K. Demcheck, U.S. Geological Survey, written correspondence, 2003.

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(C.R. Demas and D.K. Demcheck, U.S. Geological Survey, written Commun, 2003).

DOI 23 (Continued)

Regarding "alert levels," there are no enforceable alert levels per se for streambed sediments; they merely serve as suggested criteria.

DOI 24

Page 4-122, Section 4.23.1, Federal, State, Local and Private Restoration Efforts - This section largely describes the positive cumulative impacts of all restoration actions; it should be revised include the cumulative negative impacts of those efforts.

DOI 25

Page 6-3, Section 6.1.1.4, Fish and Wildlife Coordination Act Report - This section should be revised in the final PEIS to indicate that Fish and Wildlife Coordination Act Reports will also be required for all future individual projects/feasibility studies.

DOI 26

Pages B1-1 through B1- 43, Appendix B1, Programmatic Biological Assessment - The FWS offers the following comments in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended, 16 U.S.C. 1531 et seq.). The LCA draft biological assessment (BA) discusses the effects of implementing the proposed plan on Federally listed threatened and endangered species. Those species for which the FWS has jurisdiction include the threatened Louisiana black bear (*Ursus americanus luteolus*), the endangered West Indian manatee (*Trichechus manatus*), the threatened bald eagle (*Haliaeetus leucocephalus*), the endangered brown pelican (*Pelecanus occidentalis*), the threatened piping plover (*Charadrius melodus*), the endangered red-cockaded woodpecker (RCW, *Picoides borealis*), the threatened gopher tortoise (*Gopherus polyphemus*), the threatened loggerhead sea turtle (*Caretta caretta*) while nesting onshore, the threatened ringed map (=sawback) turtle (*Graptemys oculifera*), the threatened Gulf sturgeon (*Acipenser oxyrhynchus desotoi*) in riverine habitats, the endangered pallid sturgeon (*Scaphirhynchus albus*), the threatened inflated heelsplitter mussel (*Potamilus inflatus*), and the endangered Louisiana quillwort (*Isoetes louisianensis*).

According to the BA, the RCW, gopher tortoise, ringed map turtle, inflated heelsplitter mussel, and Louisiana quillwort may occur within the boundaries of the proposed action area. The proposed activities, however, would not be located within suitable habitat for those species. Any suitable habitats for those species would be located outside the region of influence for the proposed action. Thus, the FWS concurs with your determination that the proposed action would not affect those species.

Several LCA-proposed activities/projects could potentially occur within occupied Louisiana black bear habitat along the coast of Iberia and St. Mary Parishes; however, developing project plans and construction activities that avoid or minimize work in occupied habitat during the black bear denning season would avoid disturbing pregnant females and/or females with cubs. Outside the denning season, bear sightings may still occur when working in occupied habitat, but maintaining clean work sites and providing bear-proof trash receptacles for construction crews could minimize the risk of bear disturbance and conflicts. If sightings do occur, bears are likely to avoid humans, and would only be temporarily displaced by disturbance from construction activities. Habitat loss, if any, should be minimal. Therefore, the FWS concurs with your determination that the proposed action is not likely to adversely affect the Louisiana black bear.

The West Indian manatee is known to occur periodically in the coastal waters of Louisiana. Consequently, an on-board observer would be present during construction activities to alert the proper personnel, and harmful activities (e.g., dredging) would be temporarily suspended until

DOI 24: Definition of negative impacts is complicated by several factors. First, what typically indicates a negative impact in certain ecosystems, such as filling shallow water to construct land or introducing turbid nutrient rich water to aquatic ecosystems, may be an intended purpose or action within the wetland restoration program. Second, the Louisiana coastal ecosystem is degrading rapidly, with rapid landward shifts of isohalines and habitat conversions. Restoration projects designed to reverse these trends may negatively impact a given resource or habitat type on the project scale in the near-term, but overall, the health of the ecosystem will be improved compared to Future Without-Project conditions once the system reaches a new equilibrium. It is important to keep this in mind when defining negative impacts. Some impacts have been observed, however, and include wetland destruction for diversion outfall channels, temporary displacement of terrestrial and aquatic life, disruption of benthic habitats, turbidity due to construction activities, and construction noise. These impacts are generally temporary in nature and when necessary, have been mitigated.

DOI 25: The following text has been added to Section 6 in the FPEIS: " A Fish and Wildlife Coordination Act Report would be required for all future individual projects and feasibility studies that would tier from this programmatic statement."

DOI 26: Should any threatened or endangered species be sighted within any work area, the USFWS Lafayette, Louisiana Field Office would be contacted immediately. The use of recommended primary activity exclusion zones and timing restrictions would be utilized, to the maximum extent practicable, to avoid project construction impacts to any threatened or endangered species or their critical habitat (especially bald eagles, sea turtles, Louisiana black bear, brown pelicans, piping plovers or their critical habitat, and pallid sturgeon or their critical habitat) within the study area.

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the animal can move to safety. Should a manatee be sighted within any work areas, the FWS Lafayette, Louisiana, Field Office would be contacted immediately. Therefore, the proposed action is not likely to adversely affect the West Indian manatee.

Site-specific plans and construction activities could be designed to avoid potential impacts to bald eagles throughout the action area. By adhering to the primary activity exclusion zone and timing restrictions outlined in the Bald Eagle Recovery Plan, the Corps can avoid impacts to nest trees and breeding behaviors. Bald eagles may also be impacted from contaminants introduced into their food source through water and sediments diverted from the Mississippi River into areas containing foraging and/or nest sites. A study is currently being conducted on the effects of contaminants contained in water diverted from the Mississippi River on the bald eagle as a result of the implementation and operation of the Davis Pond Freshwater Diversion Structure. Although those data regarding effects on bald eagles from contaminants that may be associated with river and sediment diversions are not currently available, the Corps would reinitiate consultation with the FWS, if necessary, once those data become available. Therefore, the FWS concurs that the proposed action is not likely to adversely affect the bald eagle.

Brown pelicans nest on barrier islands and feed in shallow estuarine waters, using sand spits and offshore sand bars as rest and roost areas. Any pelicans foraging or loafing within the proposed action area during construction could easily relocate to other foraging areas in the vicinity. Potential impacts to nesting brown pelicans could be avoided by conducting activities outside the nesting season. Should the proposed activities occur during the nesting season, those activities could avoid impacting nesting pelicans by remaining outside 2,000 feet of nesting areas. Therefore, the FWS concurs that the proposed action is not likely to adversely affect the brown pelican.

Potential impacts to piping plovers could be avoided by conducting proposed construction activities outside the wintering season (July to late March or April). If any proposed projects cannot be scheduled to take place outside the wintering season, piping plovers would be able to avoid areas of temporary disturbances as long as there are feeding and/or roosting areas available along the coast. Because any plovers remaining in the action area during construction would be temporarily displaced to other suitable habitats in the vicinity, the FWS concurs that the proposed action is not likely to adversely affect the piping plover.

Potential impacts on piping plover critical habitat would be minimal and temporary during projects associated with barrier island enhancement or restoration. Although the proposed action may impact a barrier island designated as critical habitat, only a relatively small amount of habitat will be affected when compared to the amount of critical habitat available. These minimal and temporary disturbances would not be likely to affect the ability of the Critical Habitat to provide for the recovery of the species. In addition, most of the proposed barrier island restoration projects may possibly create new potentially suitable habitat (beach) for the piping plover on the Gulf side of the islands and prevent/reduce erosion of existing habitat in the vicinity. Therefore, the FWS concurs that the proposed action is not likely to adversely affect critical habitat for wintering piping plovers.

Within Louisiana, the loggerhead sea turtle has only been known to nest on the Chandeleur Islands. Because of storm processes, the Chandeleur Islands may no longer contain high beach and dune surfaces (i.e., beach structure suitable for nesting). Furthermore, recent surveys by FWS National Wildlife Refuge (NWR) personnel have found no loggerhead nests in the area. The restoration of the Terrebonne and Grand Isle barrier island chains would occur in

DOI 26 (Continued)

DOI 26 (Continued): In addition, the use of recommended primary activity exclusion zones, and timing restrictions would be utilized to the maximum extent practicable to avoid project construction impacts to brown pelicans that inhabit the study area.

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DOI 26 (Continued)

Subprovinces 2 and 3 with the proposed action. While nesting loggerhead sea turtles have historically used barrier islands, as stated above, it is doubtful that they currently nest anywhere on the Louisiana coast. The restoration of barrier islands may or may not provide suitable nesting habitat, but suitable nesting habitat is nearly nonexistent due to the current degraded state of those islands. The proposed action, therefore, would not negatively affect loggerheads, and may provide some benefit to the species by restoring nesting habitat. Accordingly, the FWS concurs that the proposed action is not likely to adversely affect nesting loggerhead sea turtles. Please be advised that the FWS is responsible for consultation only when loggerhead and other sea turtles leave the aquatic environment and come onshore to nest. The National Marine Fisheries Service (NMFS) is responsible for aquatic marine threatened or endangered species. Please contact Eric Hawk, NMFS, (727/570-5312), in St. Petersburg, Florida, for information concerning this and other sea turtle species in their aquatic environment.

Potential impacts to the Gulf sturgeon may result from river and/or sediment delivery diversions from the Mississippi River into the LaBranche wetlands and the "Golden Triangle" wetlands. Those wetland complexes would receive fresh water from the river, and the affected brackish marshes could convert to intermediate marsh as a result. While the Gulf sturgeon is known to occur within the Pearl River system, project impacts are not expected to extend into that area. Therefore, the FWS concurs that the proposed action is not likely to adversely affect Gulf sturgeon or adversely affect its critical habitat within that river system. While the FWS is responsible for consultations in riverine habitats, the NMFS has consultation responsibility for projects impacting the Gulf sturgeon in marine habitats. In estuarine habitats, consultation responsibility is based on the lead action agency: NMFS is responsible for consultations with the U.S. Army Corps of Engineers in those habitats. We, therefore, recommend that you contact Stephania Bolden, NMFS, (727/570-5312), in St. Petersburg, Florida, for concurrence concerning this species in marine and estuarine habitats.

Potential impacts to the pallid sturgeon may occur due to proposed river diversions or modifications to the Mississippi River and Atchafalaya River flows. Impacts associated with those proposed activities include but are not limited to increased turbidity, re-suspension of contaminants, and physical disturbance associated with dredging or other project construction activities. There are ways, through timing and use of different types of dredges, to minimize impacts to the pallid sturgeon caused by dredging activities. The pallid sturgeon is not likely to be affected by construction or operation of freshwater diversion structures along the Mississippi or Atchafalaya Rivers because it is a bottom dweller and is not likely to be entrained into such structures. Furthermore, the Mississippi and Atchafalaya Rivers are large enough to provide an abundance of refuge areas during construction activities or operation of any proposed diversion structures, and pallid sturgeon, as well as their prey species, should be able to actively avoid dredging sites. Therefore, the FWS concurs that the proposed project is not likely to adversely affect the pallid sturgeon.

Finally, consultations such as this one, involving a Federal agency proposal to adopt or approve a management plan or strategy that would be used to guide the development and implementation of future projects, are termed "programmatic consultations." Several courts have ruled that the decision to adopt plans or strategies that guide the implementation of future individual actions, as well as each future individual action itself, must fulfill the requirements for consultation under Section 7 of the ESA. Accordingly, while potential impacts associated with the proposed Louisiana Coastal Area Ecosystem Restoration Study TSP have been addressed at the programmatic level, an additional Biological Assessment/Biological Evaluation should be

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prepared when individual projects tiered to that plan/PEIS may affect a Federally listed threatened or endangered species and/or adversely affect designated critical habitats. DOI 26 (Continued)

Main Report – Volume I

General Comments

DOI 27 The draft Main Report is generally well-written and organized. The Department, with the revisions proposed below, strongly supports approval and implementation of the near-term TSP for the LCA. Implementation of the proposed TSP is a critically needed next step toward sustainably restoring Louisiana's imperiled coastal wetland ecosystem. Accordingly, our comments primarily focus on the need for revising the draft Main Report to address recommendations concerning the prioritization/selection of TSP projects and features, as well as procedural and administrative revisions intended to facilitate TSP approval and implementation. While we appreciate inclusion of Fish and Wildlife Coordination Act and Endangered Species Act documentation in the PEIS, we suggest the material might be better suited as appendices to the Main Report, where they are appropriately addressed.

DOI 28 Despite the extensive and successful cooperative efforts to make it more inclusive and participative, the LCA fundamentally remains a Corps of Engineers Civil Works Program proposal. Nevertheless, the Department believes that the strictly advisory role of the proposed LCA Task Force agencies should be expanded to include a greater degree of participation in the actual decision-making process which, as currently envisioned, would primarily reside with the Corps and the local sponsor. The efficiency and success of the CWPPRA Task Force, in contrast, underscores the notion that a more participative decision-making role for the LCA Task Force agencies would enhance identification and selection of preferred project alternatives and result in more transparent evaluations of the benefits and impacts of those alternatives. Such shared decision-making roles could also facilitate certain aspects of project construction, operation, and monitoring.

DOI 29 As discussed in the FWS May 2004 Draft Fish and Wildlife Coordination Act Report, and in the specific comments below, the environmental change/benefits forecasting methodology should also be improved and refined as a high priority of the proposed LCA Science and Technology Program. From a technical standpoint, valid model outputs will be essential to assessing project benefits and impacts. Procedurally, those data will also be required to ensure that the FWS can fulfill its mandates under the Fish and Wildlife Coordination Act, and meet the procedural requirements of National Environmental Policy Act and related planning policies and procedures.

DOI 30 The draft Main Report should also be revised to more fully explain how the sequencing rules were used to prioritize implementation of the features that comprise the Plan that Best Meets Objectives, to clarify why composite groups were prioritized separately, and to provide the reasoning for prioritization decisions (as seen in Section 3.5.2). While we certainly agree that implementation readiness is a key consideration, the sequencing rules should be revised to give more weight to the capability of such projects to address critical near-term ecological needs. For example, there is another alternative project to the proposed Small Bayou Lafourche Reintroduction Project, which does not meet the criteria of meeting critical ecological needs and cost effectiveness; that alternative would more effectively and logically fulfill the critical near-term ecological needs of the eastern Terrebonne Basin. If it is truly one of the five projects that meet the most critical ecological needs, a better justification is needed.

DOI 27: The Fish and Wildlife Coordination Act Report and the Endangered Species Programmatic Biological Assessment will remain as appendices to the FPEIS, and as an attachment to the Main Report.

DOI 28: Implementation of the LCA Program will be governed by the same rules and regulations typically employed in Water Resource Development Act programs. That is, decision making will be vested with the USACE, on behalf of the Federal Government, and the State of Louisiana as the local sponsor. It is recognized that close coordination with other Federal and State agencies is required for the ultimate success of the program. The LCA Task Force, the Regional Working Group, the S&T Program, and the collocated Program Execution Team provide significant opportunities for other Federal and state agencies to actively participate in program decision making and to facilitate aspects of project construction, operation, and monitoring.

DOI 29: While the precision of the current models for identifying absolute biologic outputs is currently limited, their outputs are appropriate for the comparison and identification of alternative actions. It has been recognized and acknowledged by the model developers that the potential for improvement in the precision of the models exists. It is important that the modeling effort be developed to increase the precision and uniformity of both input and output. This is a priority for future restoration plan development, implementation, operation, and management. A significant portion of this model development effort would likely be undertaken through the proposed S&T Program. It has also been acknowledged that additional models may by appropriate for the purpose of quantifying more absolute ecologic outputs.

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DOI 29 (Continued): Text has been added in the plan implementation section of the Main Report to further identify the need for modeling tools to be capable of supporting and providing consistency for other agency regulatory and management efforts.

DOI 30: The sequencing of the features identified in the PBMO is based on determining the most effective possible manner to bring those features to approval and construction. All of the features identified in the PMBO are by definition critical in nature. However, levels of fiscal appropriation, feature readiness, and the potential for conflict with future restoration actions under consideration do not support the immediate initiation of every feature. The expected annual cost-shared appropriation limit of approximately $200 million provides a basic guide for the amount of work that can be underway in any year. The level of development and status of NEPA documentation provides insight into which features could be brought to construction approval and implementation most rapidly. The most ready features could benefit from a conditional or Congressional authorization. Some features are potentially redundant to long-range concepts and therefore will not be considered until after these concepts are complete. Therefore, these features cannot be implemented in the ten-year near-term. Other features are nearly ready for implementation through other programs and funding authorities.

This information has been integrated into the plan implementation section of the Main Report.

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Specific Comments

DOI 31 Page IX, Executive Summary; Science and Technology Program Section, lines 17-20 - The objectives as stated for the S&T Plan in the main report are different from the objectives stated in the S&T Plan, Appendix A. The Department recommends using the objectives in Appendix A.

DOI 32 Page X, Executive Summary; Science and Technology Program Demonstration Projects Section, paragraph 2, bullets 3 and 4 - Pipeline canal restoration using "different methods" and Shoreline erosion prevention using "different methods". These statements are too general and the different methods should be elaborated on; that is, whatever they are or at least a few examples of each. The public and Congressional persons have routinely questioned the demonstration projects. Thus the report should be specific in explaining these projects and justifying them.

DOI 33 Page XV, Executive Summary; Areas of Controversy Section, paragraph 3 - "Elements of the public expressed concern that the LCA restoration effort will focus on the need for more studies rather than construction, operation and maintenance of restoration projects."

This is not something that the plan should take lightly, given the current perceptions with the "restoration" effort in South Florida. Science seems (that is, public perception) to be funded to a greater degree than scientific support for restoration in the Everglades, especially since, to date, little engineering has been implemented. The LCA Office of Science and Technology should consider adding this to their area of responsibility and budget, whether this includes periodic public meetings, bulk mailings of information flyers, or signs and on-line links that describe all elements of projects before, during, and after implementation. This is mentioned in the "Science guiding principles (Appendix A, P. A11)" as "Clear lines of communication would be established…[with] the public as appropriate through a coordinated effort." Details behind the dissemination of fact versus fiction within the public perception should be addressed specifically by the LCA plan.

DOI 34 Page MR-4, Section 1.0 Introduction; Subsection 1.3 Study Purpose and Scope, paragraph 1, line 2 - After "and sediments to coastal wetlands", add: "restore coastal hydrology to minimize saltwater intrusion."

DOI 35 Page MR-5, Section 1.0 Introduction; Subsection 1.4 Study Area Description, paragraph 2 - The Study Area Description is missing parishes that encompass the Atchafalaya Basin for Subprovince 3.

DOI 36 Page MR-6, Section 1.0 Introduction; Subsection 1.4 Study Area Description, figure MR-1 - Subprovince 3 needs to be extended to include the Atchafalaya Basin up to Old River Control Structure.

DOI 37 Page MR-17, Section 1.0 Introduction; Subsection 1.6.2.1 The Mississippi River and Tributaries (MR&T) Project, figure MR-11 - The figure shows 630,000 cubic feet per second (cfs) going through the control structure, whereas the text shows 620,000 cfs; need to clarify this discrepancy.

DOI 38 Page MR-18, Section 1.0 Introduction; Subsection 1.6.2.1, paragraph 4 - Under Caernarvon-Davis Pond Freshwater Diversion Projects, replace in last sentence, "non-support" with "environmental concerns."

DOI 31: The statement of objectives for the S&T Program in the main report has been revised to be consistent with those stated in Appendix A.

DOI 32: More detailed discussion of the demonstration projects program, and the initial set of relevant uncertainties that they are designed to resolve has been included in the Main Report.

DOI 33: Additional language regarding outreach efforts associated with the progress of the LCA Plan implementation, and the efforts underway through the S&T Program have been included in Appendix A and Section 5 of the Main Report.

DOI 34: Text has been revised accordingly.

DOI 35: See General Response # 3 regarding the LCA Study Area and the Atchafalaya Basin.

DOI 36: See General Response # 3 regarding the LCA Study Area and the Atchafalaya Basin.

DOI 37: Inconsistencies in the text and the figure have been corrected.

DOI 38: The sentence has been revised to state "…opposition by non-Federal interests because of environmental concerns."

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 39 Page MR-33, Subprovince 3, last paragraph - The first sentence incorrectly states that the western Terrebonne marshes are isolated from riverine influences and that the hydrology of those areas is dominated by rainfall and marine processes. That sentence should be corrected in the final Main Report to indicate that the western Terrebonne Basin marshes receive significant riverine influence through Atchafalaya Bay, the Avoca Island Cutoff Channel, Bayou Chene and adjoining waterways.

DOI 40 Page MR-34, Section 2.0 Problem Identification; Subsection 2.2.1.1.1, paragraph 1, lines 1-3 - Please clarify: "the lower Atchafalaya River Basin pass through the Upper Atchafalaya River Basin, which is not within the LCA Study Area." The Upper Atchafalaya River Basin should be in the study area.

DOI 41 Page MR-34, Section 2.0 Problem Identification; Subsection 2.2.1.1.1, paragraph 3, lines 1-3 - Add GIWW as a major navigation channel.

DOI 42 Page MR-38, Section 2.0 Problem Identification; Subsection 2.2.2.1.1, Deltaic & Chenier Plains paragraph 1, line 4-5 - We suggest replacing coastal "marshes" with "wetlands."

DOI 43 Page MR-41, Barrier Island Systems, first paragraph - This paragraph should be revised in the final report to acknowledge that the FWS manages the Breton Island NWR, on behalf of the public.

DOI 44 Page MR-43, first paragraph - The substantial increase of Subprovince 3 future-without project intermediate marsh acreage is likely not a function of deltaic land-building, as stated. Because future without-project projections (Page PEIS pp. A1-13, Table 14) show this increase as occurring primarily between target years 0 and 10, it is likely due to the averaging of salinities across large, predominately fresh marsh tracts in the salinity/habitat forecasting methodology. Although that method is satisfactory at the programmatic level, (see Appendix A Science and Technology Plan), future habitat distribution methodology refinements are needed, and should be a high priority of the Science and Technology Program. We recommend that this paragraph be revised to accurately reflect that need.

DOI 45 Page MR-43, Section 2.0 Problem Identification; Subsection 2.2.2.2.1, Deltaic & Chenier Plains, paragraph 1, lines 3-5 - Davis Pond Diversion was not in operation until December 2003, and could not have any influence until then.

DOI 46 Page MR-48, Section 2.0 Problem Identification; Subsection 2.2.2.2.2 Quantification of future land loss, Subprovince 3, paragraph 3, line 1-2 - Remove "and Atchafalaya Bay."

DOI 47 Page MR-48, last paragraph - The first sentence states that East Cote Blanche and Atchafalaya Bays will experience "increased marine influences." In the past, however, those areas have experienced a freshening trend that is expected to continue; also, wetland loss in those areas is mainly attributable to physical shoreline erosion, which is independent of salinity (i.e., marine influences). We recommend that this paragraph be revised for accuracy.

DOI 48 Page MR-57, Recreation Section - This section should be revised to emphasize that the Service manages more than 300,000 acres of National Wildlife Refuge (NWR) lands in coastal Louisiana on behalf of the public. Where threatened by significant losses, future LCA investments may be

DOI 39: Text has been revised to correctly summarize hydrology in the Terrebonne Basin.

DOI 40: See General Response # 3 regarding the LCA Study Area and the Atchafalaya Basin.

DOI 41: Text has been revised accordingly.

DOI 42: Text has been revised accordingly.

DOI 43: Language has been included in the text to state that the FWS manages the Breton Sound NWR on behalf of the public.

DOI 44: The possibility that salinity averaging in the model may result in the projected increase in intermediate marsh is very probable. The text has been changed to reflect the language in the comment.

DOI 45: The acreage estimate from the USGS reflects a start-up for Davis Pond during year 2003.

DOI 46: Concur. While the wetlands in the Atchafalaya Delta would be affected by some marine processes, the area is in a growth phase and should continue to grow regardless. The text has been revised by deleting "and Atchafalaya Bay."

DOI 47: A continuing problem in these areas, with the exception of Atchafalaya Bay (see DOI 46), is large and rapid fluctuations in salinity levels. The continued growth of the Atchafalaya Delta complex should eventually minimize this influence, however, current indications are that the mere presence of fresh water does not eliminate the effect of these marine incursions. As a result, it is not inaccurate to indicate that there are some detrimental effects that would continue to be seen without additional action.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 48: Additional language has been included in the text to mention the management of public lands in the Louisiana coastal zone by the FWS.

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needed to protect and restore those public lands. Likewise, those NWR lands may also provide benefits associated with future LCA demonstration and research projects. DOI 48 (Continued)

DOI 49 Page MR-60, Section 2.0 Problem Identification; Subsection 2.3.1 Problems, paragraph 2, bullet 6 -We suggest that bullet 6 be revised to reference both the Mississippi and Central Flyways.

Page MR-67, Section 3.0 Plan Formulation; Subsection 3.1, Planning Constraints, paragraph 1, line 7 - Add "public water supply" after "flood control."

Page MR-68, Section 3.0 Plan Formulation; Subsection 3.1.1, Scientific and Technological Uncertainties - Geographic Information Systems (GIS) are mentioned on page MR-74 with reference to socio-economic/political uncertainties. While this example is fine, geospatial technology (GIS, remote sensing, etc.) should be mentioned early on in this section so that it is clear that the technology could be used in almost all of the uncertainties associated with the study. DOI 50

DOI 51 Page MR-68, Section 3.0 Plan Formulation; Subsection 3.1.2. Type 1 - Uncertainties about Physical, Chemical, Geological, and Biological Baseline Conditions, paragraph 1, line 3 - Continued improvement of tools and networks [add] **and the acquisition of data** to better establish these baseline conditions would allow for more detailed and coastwide monitoring and assessment, which would better support program level, as well as project level, Adaptive Management, which is described in Appendix A: Science and Technology Program.

Page MR-69, Section 3.0 Plan Formulation; Section 3.1.2.1, paragraph 1, line 3 -We suggest changing "hydrologic stage and discharge data" to "hydrologic stage, discharge, and water-quality data." DOI 52

DOI 53 Page MR-70, 3.0 Plan Formulation; Subsection 3.1.2.1, bullet 3, lines 3 – 4 -Through CWPPRA, a Coastwide Reference Monitoring System (CRMS) [add] "**for wetlands (Steyer et al. 2003)** is being established…." "Networking the CRMS and BICM [spell out BICM (Barrier Island Comprehensive Monitoring)] to function as one comprehensive monitoring program would help address network…."

Page MR-88, Section 3.0 Plan Formulation; Subsection 3.3.4.1, Development of Subprovince Frameworks, paragraph 1 -We recommend that the "reduce," "maintain," " and "increase" frameworks be more fully explained in the main Report; it would also be helpful to reference and revise **Page MR-82, Section 3.3.1, paragraph 2,** to indicate the importance of understanding those scales and their effects in subsequent planning phases. The text on **Page MR-88** should also explain how a given project can be included within several frameworks. DOI 54

DOI 55 Page MR-93, Section 3.0 Plan Formulation; Subsection 3.3.4.2 Evaluations of Subprovince Frameworks, paragraph 1, last line - Appendix C HYDRODYNAMIC AND ECOLOGIC MODELING should read Appendix C HYDRODYNAMIC AND ECOLOGICAL MODELING.

Page MR-114, Convey Atchafalaya River water to Terrebonne . . . . - The last sentence of this project description should be corrected to read "This feature also includes increasing freshwater supply through repairing banks along the GIWW, enlarging constrictions in the GIWW, and diverting additional Atchafalaya River freshwater through the Avoca Island Levee into the Bayou Chene/GIWW system." DOI 56

DOI 49: Text has been revised accordingly.

DOI 50: Language has been included in the text to state that GIS technology could be used to help address almost all of the uncertainties associated with the LCA Study.

DOI 51: Text has been revised accordingly.

DOI 52: Text has been revised accordingly.

DOI 53: Text has been revised accordingly.

DOI 54: Additional language has been included in the text regarding the development of subprovince frameworks and planning scales.

DOI 55: Text has been revised accordingly.

DOI 56: Text has been revised accordingly.

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DOI 57

Page MR-116, Maintain Timbalier Land Bridge - All but the first sentence should be deleted and replaced with the following: "A 2,000-foot-wide, 21-mile-long, segmented marsh and low ridge land form (roughly 5,000 acres) would be constructed from the east bank of Bayou Terrebonne near Bush Canal to the west bank of Bayou Lafourche near the southern terminus of the hurricane protection levee. That land form would be constructed of sediment excavated and piped from the Mississippi River, Gulf of Mexico, or nearby bays, and could resemble the long, linear, segmented dredged material disposal islands in Atchafalaya Bay. The nine major bayous which connect the upper subbasin to the downstream lakes and bays would remain open; among others, they include Grand Bayou Blue and Bayous Pointe au Chien, Jean La Croix, Barre, and Tambour. The proposed land bridge alignment is in the upper salt marsh zone, minimizes impacts to existing oyster leases, and avoids most of the oil and gas fields in the Timbalier Subbasin."

DOI 58

Page MR-140, first paragraph - See comments for DPEIS Page 2-65, Section 2.5.2.2, Subprovince 3.

DOI 59

Page MR-152, Sequencing Rules - As noted in our general comments above, we are concerned that only the first-listed rule addresses ecosystem need, the rest pertain to implementation readiness. Because the Near-Term Plan is to address the most critical, near-term ecological needs, we recommend that the project sequencing rules be revised to more strongly emphasize ecosystem needs and areas of greatest future coastal wetland loss.

DOI 60

Page MR-152, Table MR-18 - To more strongly emphasize projects that meet near-term ecosystem needs, Item 13 - Convey Atchafalaya River water to Northern Terrebonne Marshes, should be ranked ahead of both Item 4 - Small Bayou Lafourche Reintroduction Project and Item 6 - Multi-purpose Operation of the Houma Navigation Canal Lock, because the benefits of the latter two projects would be enhanced by those of the first. The 10th ranked project, Increase Amite River Diversion Canal Influence by gapping banks, should be ranked last, due to its limited area of influence and subtle effects.

DOI 61

Pages MR-161 to 163, Section 4.2.3.1.1 - While we understand the proposed Mississippi River Gulf Outlet (MRGO) environmental features restoration feature would meet several critical near-term ecological needs, this section would benefit by including a brief discussion about the relationship between those proposed LCA features, and the continuing evaluation of the MRGO project. The potential impacts of the proposed restoration features to Bayou Sauvage and Breton Island NWRs should also be generically identified in the final Main report.

DOI 62

Page MR-171, Section 4.2.3.1.4, Small Bayou Lafourche reintroduction - The five projects recommended for programmatic authorization should address the "most critical ecological needs." Although the majority of Louisiana's coastal wetland loss occurs within the Barataria and Terrebonne Basins, only a portion of one (i.e., the proposed Small Bayou Lafourche Diversion) of those five projects would provide benefits to Terrebonne Basin marshes. Of the areas that would be benefited by that project, wetland loss rates are generally higher in affected portions of the Terrebonne Basin, than those in the Barataria Basin (see Table 1, below). For this reason, and because operation of the Davis Pond Freshwater Diversion Project will further reduce wetland loss rates within those portions of the Barataria Basin, none of the five Near-Term Projects selected for programmatic authorization would substantially address the critical conditions of the eastern Terrebonne Basin, which will soon disappear if nothing is done to reduce the current high rates of loss there.

DOI 57: Additional language from the comment has been included in the final report.

DOI 58: See comment response for DOI 8

DOI 59: See comment response for DOI 30

DOI 60: See comment response for DOI 30

DOI 61: See General Response on the MRGO restoration feature. Potential impacts to Bayou Savage and Breton Island NWRs have been included in the FPEIS.

DOI 62: The combination of effects from all of the proposed critical near-term features is anticipated to be synergistic. The timing of construction between individual features, or subfeatures, will be dependent on funding, readiness, start of decision document development, and speed of construction. It is not inconceivable that some feature which are initiated later than others arrive at the start or completion of construction at the same time. The sequencing of initiation for the feature in the LCA Plan is not based on the level, or priority, of need (see response to DOI 30 & 59).

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DOI 62 (Continued)

Table 1. Projected loss of 1990 wetland acres (1990 to 2050) within areas benefited by the Small Bayou Lafourche Introduction Project (from the Coast 2050 Plan).

BENEFITED AREAS	projected acres Lost	percent of 1990 wetland acres
Central Terrebonne Basin– HNC area		
Caillou mapping unit	9,960	24.6
Boudreaux mapping unit	10,130	49.2
Central Terrebonne Basin – Bayou Terrebonne area		
Terrebonne marshes mapping unit	19,620	64.5
East Terrebonne Basin – Grand Bayou area		
North Bully Camp mapping unit	10,485	45.0
St. Louis Canal mapping unit	5,020	32.3
Fields Subbasin – Company Canal area		
Fields Swamp mapping unit	3,210	14.1
Barataria Basin – Delta Farms area		
Gheens mapping unit	5,710	29.4
Clovelly mapping unit	5,635	12.1
Barataria Basin – Bayou Perot area	10,370	20.4
Perot-Rigolettes mapping unit		
Barataria Basin – Tidewater Canal area		
Caminada Bay mapping unit	19,560	51.9

The Small Bayou Lafourche Introduction Project would essentially introduce additional fresh water into the GIWW via Bayou Lafourche. However, the most rapidly deteriorating Terrebonne marshes, located in the eastern Terrebonne Basin and south of the GIWW, are largely isolated from the GIWW - only 2 small channels exist that allow GIWW water to flow southward into those areas of need. As a result, a maximum of only 76 cubic feet per second (cfs) of additional freshwater would enter this area through Bayou L'Eau Bleu (of the 1,000 cfs to be introduced into Bayou Lafourche from the Mississippi River). Presently, Bayou L'Eau Bleu receives, on a seasonal basis, up to 500 cfs (Paille, R.F. 1997. Lower Atchafalaya Basin Re-Evaluation Study: a Planning Aid Report on Freshwater Inflows to the Terrebonne Basin. U.S. Fish and Wildlife Service, Ecological Services, Lafayette, LA. 28 pp.) of the 2,000 to 4,000 cfs of Atchafalaya River freshwater that is seasonally available within this reach of the GIWW (Swarzenski, C.M. 2003. Surface-Water Hydrology of the Gulf Intracoastal Waterway in South-Central Louisiana, 1996-99. U.S. Geological Survey Professional Paper 1672. 51 pp.). Rather than introducing more freshwater into the GIWW via the proposed Bayou Lafourche diversion, the Department believes that the most logical and highest priority approach for this portion of the Terrebonne Basin (itself arguably one of the most threatened areas in the ecosystem) would be to construct/enlarge channels to seasonally introduce much larger

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DOI 62 (Continued)

quantities (i.e., 1,000 to 2,000 cfs) of already available freshwater from the GIWW. If ecological needs remain unmet after the available freshwater is used to the greatest extent practical, then the introduction of additional freshwater to the GIWW should be considered, but only if it can be successfully moved southward into the areas of need. Consequently, the Department believes that implementing the "Convey Atchafalaya River Water to Terrebonne Marshes . . ." project (either in its entirety, or only that portion which would improve distribution of existing GIWW freshwater), would more effectively address the critical ecological needs of the eastern Terrebonne Basin than would the 76 cfs (or less) that would be introduced via the Small Bayou Lafourche Reintroduction Project.

In summary, the benefits that would accrue to the Terrebonne Basin from the Small Bayou Lafourche Diversion project could be substantially enhanced if preceded by the implementation of the Convey Atchafalaya River water to Northern Terrebonne Marshes project. Accordingly, the Department recommends that, to enable the LCA to more effectively address critical wetland losses in the eastern Terrebonne Basin, the sequencing of those projects be carefully re-evaluated prior to issuance of the final Main Report.

DOI 63

Pages MR-177-178, Section 4.0 Plan Implementation; Subsection 4.2.5 Science and Technology Program - The text needs to explicitly state that the S&T Program will have an element of autonomy.

DOI 64

The text should explicitly state that the leadership of science should be a Federal-state agency partnership.

DOI 65

The Science and Technology implementation plan must include monitoring, modeling, basic research, and adaptive management feedback. Additionally, long-term monitoring is an operational function generally conducted by Federal and state agencies.

DOI 66

It is absolutely essential for the Science and Technology Program to provide feedback to engineering and future program planning. Thus, it is essential that the Science office report simultaneously to both Program Management and the Execution Team.

DOI 67

Similarly, the appropriations for the Science and Technology Program should be separate, and these budgets should be submitted to Program Management and the Program Execution Team on an annual basis for review and approval.

DOI 68

The S&T Program stated "Develop and implement a comprehensive data-management structure and process." This statement does not go far enough to ensure a successful outcome. There should be an increased emphasis on maximizing existing data-management systems already established to support coastal restoration by the collaborating agencies and science entities and to make the data available to all interested parties. The Federal government spends significant funds on data collection/management, and a reasonable effort should be made to make this information available to all. Funds should also be available to the collaborating agencies if the USACOE wants these historical data sets converted into the same new structure. The Department recommends using existing data-management tools, like National Water Information System (NWIS), as much as possible to ensure Quality assurance/Quality control, provide public access, and minimize redundancy.

DOI 69

Page MR-179, Programmatic Authority for Demonstration Projects, paragraph 1 - Please insert the following after the first sentence:

DOI 63: No element of the LCA Program will operate autonomously. Communication amongst the program elements is vital to successful execution of the LCA plan. However, no other element shall dictate to the S&T Program how to best execute its responsibilities within the context of the overall LCA Plan implementation. Development of science needs, demonstration projects, and the S&T Program's part of the adaptive management process will be managed within the S&T office.

DOI 64: Concur. Text has been added to the appendix.

DOI 65: The S&T Program does include monitoring, modeling, basic research, and adaptive management feedback, as seen in Appendix A.

DOI 66: Concur. It is stated in several places in Appendix A - S&T Plan, that there will be close coordination between Program Management, the Program Execution Team, and the S&T Office. All three of these components will contain engineering, ecological, and planning responsibilities. Figure A-2 further emphasizes this close relationship. However, since different products may be required at different times for the Program Management and the Program Execution Team, it is impractical to require simultaneous submission of all reports. Where appropriate, the S&T Office will provide reports simultaneously to both the Program Management and Program Execution Team.

DOI 67: Appropriations for the LCA Program are not separate. However, budget line items will be expressed and managed by the Program Manager as appropriate for priority and efficient execution of the program.

DOI 68: A data information system is proposed for the purposes of sharing and compiling existing data. It is envisioned that funding for agency participation may occur through inter-governmental transfers from the LCA or through cross-cutting budget authorities. Utilization of existing information management structures will be exercised when appropriate, and data made available after careful quality assurance and quality control (QA/QC) review.

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DOI 69 (Continued)

During the initial planning phases of demonstration projects, and following consultation with the involved State and Federal land management agencies, consideration should be given to locating such projects on public lands (e.g., NWRs or WMAs) or areas that might subsequently be acquired/designated for public purposes, if appropriate. In certain cases, locating such projects on public lands could potentially reduce property rights issues; ensure the long-term protection and management of project features; facilitate adaptive management, monitoring and modifications; and enable public entry/uses, as/ where appropriate.

DOI 70

Page MR-182, Programmatic Authority for Beneficial Use of Dredged Material, paragraph 2 - Please insert the following after the penultimate sentence:

Where wetland losses and/or comprehensive coastal plans warrant such projects, suitable public lands and water-bottoms (e.g., NWRs or WMAs) may be ideal locations for beneficial placement of spoil projects. In certain cases, locating such projects on public lands could potentially reduce, minimize, and avoid property rights issues; ensure the long-term protection and management of project features; facilitate adaptive management, monitoring and modifications; and enable public entry/uses, as/where appropriate.

DOI 71

Page MR-188, Coastal Louisiana Ecosystem Protection and Restoration Task Force - Because complex and large-scale projects are required to achieve sustainable coastal restoration, continuous support and cooperation will be needed from all involved Federal and State natural resource agencies. To facilitate such support and cooperation, and to better utilize the various agencies' expertise, the Department recommends that all LCA Task Force agencies be included as voting and decision-making partners, much as they are under the CWPPRA Task Force, to the maximum extent practicable.

DOI 72

Page MR-189, Section 4.0 Plan Implementation; Subsection 4.2.7 Science and Technology Office, paragraph 1, line 5 - We reiterate the need to use stronger language reflecting S&T Program independence, so that there is a measure of autonomy. Additionally, the third sentence should be extended as follows: ". . . , yet that office must also fully meet the scientific and technical needs of the participating agencies.

DOI 73

Page MR-193, CWPPRA Task Force - The first two sentences in this section should be carefully revised to eliminate any potential indication that the CWPPRA Task Force would be subordinate to the LCA Task Force; rather, that text should be revised to emphasize that both entities will foster a high degree of cooperation and consultation, inasmuch as both will be essential to implementing sustainable restoration of Louisiana's coastal ecosystem.

DOI 74

Page MR-203, Fee excluding minerals (with prohibition on the use of the surface) - This section should be expanded to include the following:

Where feasible and appropriate, lands acquired in fee title to implement the TSP may be transferred to an appropriate State or Federal land management agency, following consultation with and concurrence by the receiving agency. Such transfers shall ensure the long-term protection and management of project features; facilitate adaptive management, monitoring and modifications; and enable public entry/uses, as/where appropriate.

DOI 69: While the USACE concurs with the approach, the statement has not been included in the appendix as that inclusion may limit opportunities. Coordination of public lands interests would be accomplished during development of decision documents.

DOI 70: See DOI 69.

DOI 71: See response to DOI 28.

DOI 72: See response to DOI 63. The responsibility of the S&T Office is first, to address the scientific needs of the LCA Program. Within the context of meeting the S&T Program needs, the needs of those participating agencies endeavoring to fulfill the Program requirements will also be met.

DOI 73: While related by composition and focus of their efforts, the two task forces have separate authority and no supervisory relationship to the LCA Program. The execution of the LCA program will likely be the responsibility of the USACE and the Louisiana Department of Natural Resources, and the responsibility for execution of the CWPPRA program will remain vested in the CWPPRA Task Force. Also, text will be revised to clarify the separation of these two working bodies.

DOI 74: The suggested language has not been included in the LCA Plan. The fee acquisition of land will be primarily limited to that required for the construction of permanent elements such as diversion structures, channels, and levees. Significant areas of perpetual estates will be acquired for the purposes of restricting the modification of created wetlands including easements for flowage, deposition, and O&M. During the completion of decision documents for specific feature, the consideration of fee acquisition as a possible optimal means of implementation and management will be considered. The best options for management of any such acquired wetlands will have to be considered by the local cost share sponsor and all the involved management agencies as part of the final implementation recommendations.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 75 Page MR-213, Streamlined Implementation Process - The Department concurs that streamlining the implementation process is needed, and will continue to work with the LCA cooperating agencies to identify ways to do so while fulfilling the legislative and procedural requirements of the Fish and Wildlife Coordination Act, the Endangered Species Act, and the National Environmental Policy Act.

DOI 76 Page MR-214, Section 4.0 Plan Implementation; Subsection 4.8.4 Monitoring and Adaptive Management, paragraph 1, line 5 - The text should identify the need to increase percentage project funding for monitoring and Adaptive Management.

Main Report, Appendix A – Science and Technology Plan

General Comments

DOI 77 The draft LCA Science and Technology (S&T) Program plan is generally well-written. The Department strongly endorses the concept that sustainable restoration of Louisiana's coastal ecosystem must rest on a foundation of scientific excellence and credibility. We are also acutely aware, however, that much time and effort can potentially be expended on scientific inquiry and research, while Louisiana's coastal ecosystem continues to decay with each passing day. We believe the draft S&T plan lays out a generally sound approach to incorporating the best available science into the LCA program, while focusing on those issues of most direct relevance to meeting the restoration and protection needs of the coastal Louisiana ecosystem.

DOI 78 A near-term, high priority scientific need to support the restoration of Louisiana's coastal wetlands involves addressing the uncertainties related to applied and practical restoration by quickly developing or refining project planning tools, hydrologic and environmental forecasting models and methods, environmental monitoring to facilitate adaptive management, and implementing carefully selected studies and demonstration projects. To reduce restoration uncertainties and facilitate development of effective and sustainable large-scale restoration features, planners must be aware of changing wetland loss patterns, the causes of such wetland loss, and the effectiveness of projects implemented to address that loss. To meet those needs, high-quality imagery of coastal areas such (such as Digital Ortho Quarter Quads or DOQQs) must be made quickly available every 5 years, as should data from which land loss rates can be determined.

DOI 79 Accurate hydrologic models are also extremely important in forecasting existing and future environmental conditions. Such models require extensive elevation/bathymetry data and continuous field data from numerous sites for model calibration and verification. Continuous, quality checked and controlled field data from appropriate locations will be needed to monitor project effects; those data may be also be very useful in guiding the operations of diversion structures.

DOI 80 The distinction between the S&T Program and S&T Plan is not clear and seems to be used interchangeably throughout the text in certain instances. This should be more clearly spelled out earlier in the document. The S&T Program does not intuitively bring to mind a group of scientists or individuals as intended, especially when all other working groups are distinguished as "teams."

DOI 75: Comment noted.

DOI 76: The suggested language has not been included in the Main Report. The report will remain consistent with existing policy and regulations in relation to current limits on monitoring and adaptive management costs.

DOI 77: Concur.

DOI 78: Concur.

DOI 79: No changes have been made because appropriate references to spatial and temporal data requirements are provided in the appendix.

DOI 80: The use of the terms program and plan refer to aspects of the S&T effort for the LCA Plan. The S&T program is the component of the LCA that will direct scientific efforts to address uncertainties and develop new restoration approaches, while the S&T Plan specifies the structure, management, and general approach for the S&T Program.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 81 The Data Management Section focuses on ambiguous "tools" and does not mention the technologies that are essential and legally mandated, like FGDC compliant metadata, Quality Assurance/Quality Control (QA/QC), long-term maintenance, and system upgrades. Additionally, although a collaborative environment is mentioned throughout the text, there are no declarative statements that data management will be truly a distributed function. The importance of utilizing currently functioning database systems and historical datasets should also be mentioned. These systems and available datasets currently support restoration managers and areas accessible to the public.

Specific Comments

DOI 82 Page A-1, Section 1.0 Introduction; paragraph 1, line 2 - We suggest changing "The body of scientific knowledge and data for coastal Louisiana has…" to "The body of scientific data and knowledge for coastal Louisiana has…."

DOI 83 Page A-1, Section 1.0 Introduction; paragraph 1, line 5 - We suggest deleting "data and" from the sentence "However, certain aspects require increased data and monitoring, modeling, and research and experimentation to decrease uncertainties, especially in the area of predicting ecosystem response to the restoration projects." to read "However, certain aspects require increased monitoring, modeling, and research and experimentation to decrease uncertainties, especially in the area of predicting ecosystem response to the restoration projects."

DOI 84 Page A-1, Section 1.0 Introduction; paragraph 2, line 1 - We suggest changing the sentence "The LCA Program Execution Team requires a formal, clear, concise, and effective…" to "The LCA Program Execution Team (see section 4.2, LCA main report for definition) requires a formal, clear, concise, and effective…."

DOI 85 Page A-1, Section 1.0 Introduction; paragraph 2, line 9 - We suggest changing the sentence "This S&T Plan reaffirms the need for close and continuing coordination between the scientific community, state and Federal coastal resource managers, and the LCA Program Execution Team." to "This S&T Plan reaffirms the need for close and continuing coordination between the scientific community, state and Federal coastal resource managers, and the LCA Program Execution Team for integration of coastal protection activities occurring throughout coastal Louisiana."

DOI 86 Page A-2, Section 1.0 Introduction; Subsection 1.1, paragraph 1 - We suggest changing the following sentences: "The coastal areas have also been important for wintering waterfowl with several studies conducted to understand relationships between waterfowl use and habitat conditions. Oil and gas exploration and production have prompted numerous studies on subsurface geologic conditions (Wallace, 1966). Additional geologic conditions have been investigated to aid in understanding deltaic processes that have shaped the Louisiana coast (Fisk, 1944; Kolb and Van Lopik, 1958; Frazier, 1967; May, 1984; Smith et al., 1986; Penland et al., 1988; Dunbar et al., 1994; 1995). Studies on the Atchafalaya River and delta have also contributed to our understanding of deltaic processes (U.S. Army Corps of Engineers, 1951; Fisk, 1952; Shlemon, 1972; Wells and Roberts, 1984; Smith et al., 1986)." to "The coastal areas also have been important for wintering waterfowl with several studies conducted to understand relationships between waterfowl use and habitat conditions. Geologic conditions have been investigated to aid in understanding deltaic processes that have shaped the Louisiana coast (Fisk, 1944; Kolb and Van Lopik, 1958; Frazier, 1967; May, 1984; Smith et al., 1986; Penland et al., 1988; Dunbar et al., 1994; 1995). Studies on the Atchafalaya River and delta have also

DOI 81: Concur. These issues will be addressed as early actions by the S&T Office.

DOI 82: Concur. Text changed as suggested in the comment.

DOI 83: Concur. Text changed as suggested in the comment.

DOI 84: Concur. Reference to the Program Execution Team has been removed from this paragraph.

DOI 85: Concur. Reference to the Program Execution Team has been removed from this paragraph.

DOI 86: Concur. Text changed as suggested in the comment.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 86 (Continued)

contributed to our understanding of deltaic processes (U.S. Army Corps of Engineers, 1951 Fisk, 1952; Shlemon, 1972; Wells and Roberts, 1984; Smith et al., 1986). Oil and gas exploration and production have prompted additional studies on subsurface geologic condit (Wallace, 1966)."

DOI 87

Page A-2, Section 1.0 Introduction; Subsection 1.1, paragraph 2 - We suggest changing the following sentences: "…successfully meeting restoration goals would be necessary during ..... LCA Plan implementation. The LCA Project Delivery Team (PDT) reviewed annual adaptive management reports prepared to assess previously constructed CWPPRA projects. These efforts to identify lessons learned from the many CWPPRA projects, past and future, will also serve as a valuable assessment of what worked and why." to "…successfully meeting restoration goals would be necessary during later LCA Plan implementation. Adaptive management reports were prepared to assess previously constructed CWPPRA projects, identify lessons learned from the many CWPPRA projects, and serve as a valuable assessment of what worked and why."

DOI 88

Page A-2, Section 1.0 Introduction; Subsection 1.1, paragraph 3 - We suggest changing the sentence order of references to "(Dunbar et al., 1992, Barras et al., 1994, Barras et al., 2003)".

DOI 89

Page A-2, Section 1.0 Introduction; Subsection 1.1, paragraph 3 - Change "Federal and state statutes authorize and finance Louisiana coastal wetland restoration efforts on a large scale (Boesch, et al. 1994)." to "Federal and state statutes authorize and finance wetland restoration efforts throughout coastal Louisiana (Boesch, et al. 1994)."

DOI 90

Page A-3, Section 1.0 Introduction; Subsection 1.1, paragraph 4 - We suggest correcting the format of ending parentheses "(61.9 $km^{2)}$" to "(61.9 km^{2})".

DOI 91

Page A-3, Section 1.0 Introduction; Subsection 1.1, paragraph 5 - We suggest changing the following sentences: "Section 5.0 provides an approach for execution of the S&T Plan, and lists the general types of studies to be conducted and subsequent studies focused on issues of uncertainties. Section 5.0 will be continuously reviewed and updated annually, to assess implemented project outputs and to incorporate lessons learned using the adaptive management strategy to improve Program Management for subsequent years." to "Section 5.0 provides an approach for execution of the S&T Plan, and lists the general types of studies to be conducted and subsequent studies focused on reducing scientific uncertainties. Section 5.0 will be continuously reviewed and updated annually, to assess implemented project outputs and to incorporate lessons learned by using an adaptive management strategy to improve Program Management for subsequent years."

DOI 92

Page A-3, Section 1.0 Introduction; Subsection 1.2, paragraph 1 - Delete "(See Management Section in OCA Main Report for definition.)"

DOI 93

Page A-3, Section 1.0 Introduction; Subsection 1.2, paragraph 1 - We suggest changing the sentence "Such a process requires the development of key tools – such as development of baseline data and…" to "Such a process requires the development of key tools, such as sound baseline data and…."

DOI 94

Page A-4, Section 1.0 Introduction; Subsection 1.2, paragraph 2, bullet 5 - We suggest changi the sentence "Through scientific evaluations, assessments and peer reviews, assure science implemented, conducted or produced by the S&T Program meets an acceptable standard of quality, credibility, and integrity," to "Conduct scientific evaluations, assessments and peer

DOI 87: Concur. Clarification added that previous CWPPRA monitoring reports were reviewed during plan formulation.

DOI 88: Concur. Order of reference citations changed.

DOI 89: Concur. Text changed as suggested in the comment.

DOI 90: Concur. Text changed as suggested in the comment.

DOI 91: Concur. Text changed as suggested in the comment.

DOI 92: Concur. Text changed as suggested in the comment.

DOI 93: Concur. Text changed as suggested in the comment.

DOI 94: Concur. Text changed as suggested in the comment.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 94 (Continued)

reviews to assure that the science implemented, conducted or produced by the S&T Program meets an acceptable standard of quality, credibility, and integrity."

DOI 95

Page A-5, Section 1.0 Introduction; Subsection 1.2, paragraph 3 - We suggest changing the sentence "The intent of this S&T Plan is to provide a foundation, organizational structure and processes for continual dialog among scientists, the Program Management Team, and the Program Execution Team," to "In performing these activities, the S & T Program should maintain continual dialog among scientists, the Program Management Team, and the Program Execution Team."

DOI 96

Page A-5, Section 1.0 Introduction; Subsection 1.3, bullet 4 - Delete the space before "Minimize uncertainties about the system or system components…."

DOI 97

Page A-6, Section 1.3.1.1., Science Information Needs - The heading for section 1.3.1 is "S&T Program Structure," but the first sentence addresses the 5 primary components in the "S&T PLAN". Is this intended? We recommend that this section also include a brief discussion of how the LCA Task Force will participate, along with the Program Management and Execution Teams, in prioritizing the science needs and the work of the LCA S&T program.

DOI 98

Page A-7, Section 1.0 Introduction; Subsection 1.3.1.2, paragraph 1 - Add "Coastwide" in the sentence "…ongoing monitoring systems like the CWPPRA Reference Monitoring System for Wetlands as appropriate." to read "…ongoing monitoring systems like the CWPPRA Coastwide Reference Monitoring System for Wetlands as appropriate."

DOI 99

Page A-7, Section 1.0 Introduction; Subsection 1.3.1.4, paragraph 1 - This section only describes AEAM, NOT modeling as the section title suggests. Suggest modifying the section so that it agrees with the section title.

DOI 100

Page A-7, Section 1.0 Introduction; Subsection 1.3.1.4, paragraph 1 - Delete the sentence "The efficacy is determined through monitoring and other means to improve the response of the system (Holling and Gunderson, 2002)."

DOI 101

Page A-9, Section 1.0 Introduction; Subsection 1.4, paragraph 2 - This is the third instance that this information is provided. We recommend deleting the entire paragraph "This S&T Plan provides a strategy…resources needed to overcome those gaps and limitations." to eliminate this redundancy.

DOI 102

Page A-10, Section 1.0 Introduction; Subsection 1.5.1, paragraph 1 - The PBSJ report should be cited at the end of the sentence "Therefore, an early step taken to construct the S&T Plan was to conduct a workshop for scientists from Louisiana and across the Nation to provide suggestions that could be used by the Corps and State to identify data gaps and enhance development of a science-based Adaptive-Management Decision-Support System (add citation here)."

DOI 103

Page A-10, Section 1.0 Introduction; Subsection 1.5.1, paragraph 1 - Remove the dash between "adaptive" and "management".

DOI 104

Pages A-11 and A-12, Section 1.0 Introduction; Subsection 1.6, paragraph 1-2 - Much of these two paragraphs are redundant with paragraph 2, page A-3. We suggest moving subsection 1.6 paragraphs to the end of subsection 1.1.

DOI 95: Concur. Text changed as suggested in the comment.

DOI 96: Concur. Text changed as suggested in the comment.

DOI 97: The roles of the LCA Task Force, PM, and PET are explained in the LCA Plan.

DOI 98: Concur. Text changed as suggested in the comment.

DOI 99: Concur. Title changed to refer to AEAM.

DOI 100: Concur. Text changed as suggested in the comment.

DOI 101: Concur. Paragraph deleted.

DOI 102: This statement does not need a citation, however, the date of the workshop has been included in the text.

DOI 103: Concur. Adaptive Management changed to AEAM.

DOI 104: Concur. This section has been moved to an earlier position in the document.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 105 Page A-13, Section 2.0 AEAM; Subsection 2.1, paragraph 3 - We suggest changing the sentence "At a project level, the Caemarvon Freshwater Diversion has incorporated…." to "At a project level, the Caemarvon Freshwater Diversion, which is located in southeast Louisiana, has incorporated…."

DOI 106 Page A-14, Section 2.0 AEAM; Subsection 2.1, figure A-2.1 - We suggest changing the heading "Science Office" to "S&T Office."

DOI 107 Page A-14, Section 2.0 AEAM; Subsection 2.1, figure A-2.1 - We suggest replacing the comma with a semi-colon to read "Monitor outcomes of changes; Repeat cycle as required."

DOI 108 Page A-15, Section 2.0 AEAM; Subsection 2.1, paragraph 7 - We suggest changing the sentence to read, "An AEAM framework would be used to help guide restoration actions toward a sustainable condition. Several components within an AEAM framework include: goals and objectives, conceptual models, performance measures, role of targets, project communication frameworks, and decision-making approaches. A summary of selected AEAM elements is discussed below."

DOI 109 Page A-18, Section 2.0 AEAM; Subsection 2.1.1.5, paragraph 1 - Delete the last sentence "Prior studies would not be repeated due to the lack of this important element of AEAM."

DOI 110 Page A-20, Section 3.0 Science and Technology Program Implementation; Subsection 3.2.1, paragraph 1 - For consistency, we suggest using a full set of parentheses around numbers in the sentence "For example, funds could be used to: (1) develop... and (2) fund coastal restoration…."

DOI 111 Page A-20, Section 3.0 Science and Technology Program Implementation; Subsection 3.2.1.1, paragraph 1 - We suggest changing "request" to "requests" in the sentence "Program budget requests are prepared…."

DOI 112 Page A-24, Section 3.0 Science and Technology Program Implementation; Subsection 3.3, paragraph 1 - We suggest adding a sentence to read, "…for the Program Execution Team, and it must maintain regular and frequent communication with those planning, designing and constructing projects. A seamless integration of monitoring, modeling, and research activities and personnel is critical to the success of the S&T Plan and will remain a high priority of the S&T Office. Several related functions are discussed below."

DOI 113 Page A-24, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.1.1, paragraph 2 - We suggest changing "mathematical" to "numerical" when describing models. "Three broad categories of models are possible: conceptual, physical, and numerical. Conceptual models…a clear picture of alternatives under discussion. Numerical models can be used as a surrogate…."

DOI 114 Page A-26, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.1.2, paragraph 2 - We suggest changing "Models would be developed by the S&T Program jointly with the Program Execution Team to ensure product utility, and the Program Execution Team would use those models." to read "Models would be developed by the S&T Program jointly with the Program Execution Team to ensure product utility and utilization by the Program Execution Team."

DOI 105: Concur. Text changed as suggested in the comment.

DOI 106: Concur. Figure changed.

DOI 107: Concur. Figure changed.

DOI 108: Concur. Text changed as suggested in the comment.

DOI 109: Concur. The last sentence of this paragraph was deleted.

DOI 110: Concur. Text changed as suggested in the comment.

DOI 111: Concur. Text changed as suggested in the comment.

DOI 112: Concur. Text changed as suggested in the comment.

DOI 113: The term "mathematical" is used to describe models because this term is more familiar to the public, even though solution of equation sets for simulation of processes is usually referred to as numerical modeling.

DOI 114: Concur. The text has been changed to clarify roles in model development and execution.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 115 Page A-26, Section 3.3.1.2. The LCA Approach, first paragraph on page - In addition to their capability to aid in project design efforts, the Service also recommends that this paragraph be revised to indicate that environmental models must also be capable of providing results that will meet agency requirements for compliance with NEPA and the Fish and Wildlife Coordination Act. The Service will participate with the Program Execution Team to ensure that priority is placed on further developing and refining of environmental models and their associated outputs to meet both the needs of Service and the LCA restoration goals.

DOI 116 Page A-26, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.2, paragraph 1 - We suggest removing the comma after the word "focused", so that the sentence reads "…only through effective data acquisition, monitoring, and focused applied research can…."

DOI 117 Page A-26, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.2, paragraph 1 - We suggest changing the word "predictive" to "numerical", so that the sentence reads "…improve conceptual and numerical models and working hypotheses."

DOI 118 Page A-28, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.3.1, paragraph 1 - Change the last sentence to read "A well-conceived computing and information framework is key to this success and should be constructed by appropriate scientists and resource managers in conjunction with information technology (IT) personnel."

DOI 119 Page A-29, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.3.2, bullet 6 - Change "Science and Technology program" to "S&T Program".

DOI 120 Page A-29, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.3.2 Data Management, Computing and Information Framework, Data Centers - Partnership collaboration is not stressed in this section, although most of the data does not reside at the USACE. The USGS, for instance, has a long history of data collection and management and the Department recommends stressing partnerships with existing groups.

The Department recommends that data-management policy and statements encompass a larger group than the USACOE, since considerable datasets are collected and managed by other agencies, such as the USGS.

DOI 121 Page A-30, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.3.2 Data Management, Computing and Information Framework, Data Centers, lines 1 and 2 - A data-management framework group/committee will be mandatory to develop a large cooperative program. There is no way that one person or one agency will be capable of addressing all the management needs. The Department recommends the formation of the Data Management group.

DOI 122 Page A-30, Section 3.0 Science and Technology Program Implementation; Subsection 3.3.4.1, paragraphs 2 and 3 - We suggest changing the words "Science Plan" to "S&T Plan;"

DOI 123 Page A-35, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.1, paragraph 1 - We suggest changing the words "Science and Technology" in the first sentence to "S&T."

DOI 124 Page A-35, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.1, paragraph 1 - The "LCA PDT" has not been defined. We suggest changing the following: "The LCA PDT recognizes those uncertainties and has formulated a plan with this recognition. Largely based on

DOI 115: Modeling results will be used for all appropriate and defensible purposes, and interagency coordination will be an important component of model development and use.

DOI 116: Concur. Text changed as suggested in the comment.

DOI 117: Concur. Text changed to eliminate the term "predictive."

DOI 118: Concur. Text changed as suggested in the comment.

DOI 119: Concur. Text changed as suggested in the comment.

DOI 120: Comment noted. The appendix specifies that databases will be constructed by appropriate scientists and resource managers.

DOI 121: Comment noted.

DOI 122: Concur. Text changed as suggested in the comment.

DOI 123: Concur. Text changed as suggested in the comment.

DOI 124: Concur. Text changed as suggested in the comment.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 124 (Continued)

knowledge gained from research in the coastal zone and restoration projects constructed in the past 10 years under CWPPRA, the LCA PDT has identified the number of restoration features…" to read, "The LCA plan recognizes those uncertainties and has formulated a plan with this recognition. Largely based on knowledge gained from research in the coastal zone and restoration projects constructed in the past 10 years under CWPPRA, the LCA plan identifies the number of restoration features…."

DOI 125

Page A-35, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1, paragraph 1 - We suggest changing "Continued improvement of tools and networks to better document these baseline conditions would allow for more detailed and coast wide monitoring and assessment, which would better support program-level, as well as project-level, adaptive management." to read, "The expansion and evolution of new and existing tools and networks will provide additional baseline data throughout coastal Louisiana for more detailed program-level and project-level assessments."

DOI 126

Page A-36, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 2 We recommend indenting the paragraph to be consistent with other formatting.

DOI 127

Page A-36, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 3 We suggest changing "…closely with the National Geodetic Survey (NGS) to establish a network of NGS High Accuracy…" to read "…closely with the National Geodetic Survey (NGS) to establish High Accuracy…."

DOI 128

Page A-36, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 3 Spell out "National Oceanic and Atmospheric Administration (NOAA)."

DOI 129

Page A-36, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 4 We suggest changing "…processes contributing to site-specific areas across the coast and rates of subsidence." to "…processes contributing to site-specific rates of subsidence across the coast."

DOI 130

Page A-37, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.1, paragraph 4 Change "coastal" to "coast" "…bathymetry of segments of the coast."

DOI 131

Page A-37, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.4, paragraph 1 Spell out "Louisiana Department of Natural Resources (LDNR)" and "Minerals Management Service (MMS)".

DOI 132

Page A-38, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.2.1.5, paragraph 1 We suggest revising the sentence so that it reads "Through CWPPRA, a Coastwide Reference Monitoring System (CRMS) for wetlands is being established…."

DOI 133

Page A-38, Section 4.0 Scientific and Technology Uncertainties; Heading 4.2.3 - We suggest changing the sentence to read, "Uncertainties about our Scientific Understanding of Coastal Ecological Processes…"

DOI 134

Page A-41, Section 4.0 Scientific and Technology Uncertainties; paragraphs 2, 5, and 6 - We suggest changing the wording, "Science and Technology" to "S&T."

DOI 125: Concur. Text changed as suggested in the comment.

DOI 126: Concur. Text changed as suggested in the comment.

DOI 127: Concur. Text changed as suggested in the comment.

DOI 128: Concur. Text changed as suggested in the comment.

DOI 129: Concur. Text changed as suggested in the comment.

DOI 130: Concur. Text changed as suggested in the comment.

DOI 131: Concur. Text changed as suggested in the comment.

DOI 132: Concur. Text changed as suggested in the comment.

DOI 133: Concur. Text changed as suggested in the comment.

DOI 134: Concur. Text changed as suggested in the comment.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

DOI 135 Page A-42, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.3.5, paragraph 1 - The last sentence should read "…significance of the uncertainties relative to the advancement of the LCA Program [Add] in coordination with Program Management and the Program Execution Team."

DOI 136 Page A-42, Section 4.0 Scientific and Technology Uncertainties; Subsection 4.3.6, paragraph 3 - We suggest changing the sentence to read "…projects currently in the engineering and design phase under CWPPRA, as well as existing restoration projects may be examined…."

DOI 137 Page A-46, Section 5.0 LCA Science and Technology Agenda; Subsection 5.2, paragraph 2 - We suggest changing the sentence "Moves to focus the S&T Program and would be updates less often…" to "S&T Program focus would be updated less often…."

DOI 138 Page A-47, 5.0 LCA Science and Technology Agenda; Subsection 5.2.2, paragraph 1 - We suggest changing the sentence to read "…relevant to the LCA Plan are identified below; they may be used to reduce…."

DOI 139 Page A-47, 5.0 LCA Science and Technology Agenda; Subsection 5.2.2, paragraph 2, line 1-2 - We suggest changing the sentence "…implemented early in the 5-year program cycle" to "…implemented early in the 3-year program cycle."

DOI 140 Page A-47, 5.0 LCA Science and Technology Agenda; Subsection 5.2.2, paragraph 2 - Change numbered items "8)", "9)", and "10)" to "1)", "2)", and "3)."

DOI 141 Page A-48, 5.0 LCA Science and Technology Agenda; Subsection 5.2.3, paragraph 2, line 8 - Spell out "CE" when first introduced in text.

DOI 142 Page A-55, 5.0 LCA Science and Technology Agenda; Subsection 5.4.1.1, paragraph 1 - Change "AM" to "AEAM."

DOI 143 Page A-58, 6.0 Literature Cited - Add two GAO report references GAO-03-345 and GAO-03-999T.

Main Report, Appendix C – Hydrodynamic and Ecological Modeling

General Comments

DOI 144 The subject modeling system is a vitally needed tool for assessing the sub-province-level effects of multiple restoration projects, especially those involving diversions. As noted above, however, future-without-project habitat type acreage predictions at year 10 differ significantly from actual year 0 conditions in several cases. Those differences strongly suggest that additional forecasting improvements are needed. Given concerns about possible diversion-related over-freshening, accurate salinity and habitat type predictions will be needed to assess project effects and maintain public support for critically important restoration features. The Department, therefore, recommends that refinement and improvement of salinity and habitat type forecasting models and methodologies be completed as one of the highest priorities of the S&T program. Ideally, those model refinements and improvements should be completed and validated prior to the final design, assessment, or implementation of the first LCA projects.

DOI 135: Concur. Text changed as suggested in the comment.

DOI 136: Concur. Text changed as suggested in the comment.

DOI 137: Concur. Text changed as suggested in the comment.

DOI 138: Concur. Text changed as suggested in the comment.

DOI 139: Concur. Text changed as suggested in the comment.

DOI 140: Concur. Text changed as suggested in the comment.

DOI 141: Concur. Text changed as suggested in the comment.

DOI 142: Concur. Text changed as suggested in the comment.

DOI 143: Concur. Text changed as suggested in the comment.

DOI 144: Model advancement is vital to the future planning activities and implementation of the LCA Plan. For this reason, LDNR continues to fund the Coastal Louisiana Ecosystem Assessment and Restoration (CLEAR) program in order to improve existing models and to build new models that will assist in project-level benefits forecasting. These activities will be an integral part of the S&T Program.

Letter 74: Dr. Stephen R. Spencer, U.S. Department of the Interior (DOI)

Thank you for the opportunity to comment on the draft environmental documents for this important effort. If you have questions or need further information, please contact us at (505) 563-3572.

Sincerely,

Stephen R. Spencer, Ph.D.
Regional Environmental Officer

Letter 75: Dr. Stephen R. Spencer, U.S. Department of the Interior, Mineral Management Service (DOIS)

United States Department of the Interior
OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
P.O. Box 26567 (MC-9)
Albuquerque, New Mexico 87125-6567

TAKE PRIDE IN AMERICA

August 26, 2004

ER 04/0500

Dr. William P. Klein, Jr.
Mr. Tim Axtman
U.S. Army Corps of Engineers
New Orleans District
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Sirs:

The U.S. Department of the Interior has reviewed the July 2004 Louisiana Coastal Area Ecosystem Restoration Study Draft Programmatic Environmental Impact Statement (DPEIS) and Main Report. In this regard, the following enclosed supplemental comments are provided in addition to those provided in our letter dated August 23, 2004.

Draft Programmatic Environmental Impact Statement

General Comments

DOIS 01

Marine Environment
There is a general lack of focus in the description and analysis of the offshore marine environment. The analysis tends to center on the estuarine and coastal environment. The scope of the DPEIS includes the offshore environment, as a significant part in fact, and as result should receive a similar level of analysis as the estuarine/coastal environment.

DOIS 02

Quantification and Professional Judgement
The PDEIS tends to present data, conclusions, and interpretations without references. We encourage the use of citations to the extent practicable. The document would be improved if the technical basis of the report was substantiated with references.

This generally holds for quantification as well. A good estimate is always more desirable than a simple subjective modifier. We suggest increasing the quantification of information presented, and reducing the use of qualitative terms, such as "significant."

The word "significant" is used in a National Environmental Policy Act (NEPA) context as well as a simple qualitative descriptor. We suggest restricting use of "significant" to the NEPA context, to enhance the clarity of the material.

DOIS 01: Additional description of the offshore marine environment, especially regarding the offshore sand deposit areas such as Ship Shoal, provided by the MMS have been included in the final report.

DOIS 02: The use of the term "significant" has been limited in the FPEIS to coincide within the context of the National Environmental Policy Act (NEPA). Additional clarification on the plan formulation process, identification of professional or expert judgment, and citations has been included in the FPEIS.

Letter 75: Dr. Stephen R. Spencer, U.S. Department of the Interior, Mineral Management Service (DOIS)

DOIS 02 (Continued)

We encourage explicit acknowledgement of the role of professional, or expert, judgment where quantitative information is missing. For example, the technical basis for the development and evaluation of alternatives is first, expert judgment, and (presumably) second, some public scoping input. There is no explicit acknowledgement of this fact in the summary or the body although professional judgment is mentioned in one of the cells for Phase I of Table 2-1. In our opinion, the flow diagrams in Tables 2-11 and 2-12, which explain the thought processes for deriving the Tentatively Selected Plan (TSP), fail to explain the decision-making process in a way that is transparent and traceable.

Another example can be found in the summary, and at strategic points in Sections 1 and 2. The narrative does not clearly articulate that the results of the evaluation and selection of alternatives depended on the professional expert judgment of the development team. The corollary being that these results are inherently subjective and idiosyncratic to that team, and that a different team could offer up variations to the frameworks and restoration features proposed. The documents should emphasize and explain the level of confidence in the reproducibility of the decisions leading to the menu of restoration features in the TSP. We encourage a discussion of the procedural checks or methodological controls that were part of the decision-making process, and that tended to minimize subjectivity.

DOIS 03

The planning process and PDEIS could be improved with a clear, concise, transparent, and rigorous discussion of how the various frameworks and 79 restoration features were evaluated, culled, and selected. The evaluation and selection methodology is an application of expert judgment, however, readers do not know whether or not techniques that could provide a structured and traceable approach were employed. Examples of such approaches would be a formal expert elicitation or an approach guided by decision analysis (DA). The evaluation of multiple alternatives, manifest uncertainties, and weighting with sorting criteria, critical needs criteria, and cost is complex enough that it would greatly benefit from a structured DA approach to make the plan selection process accessible and traceable. A DA would make the results as analytically rigorous as possible and the selections would be more defendable because the process allows quantification of uncertainty. Agencies that apply DA find that outputs are perceived as less subjective and agencies are in a better position to argue for the funding needed. The approach taken in the DPEIS has relative merit, but we believe that the choices derived from the planning process could be better defended with a structured and traceable approach.

DOIS 04

Consistent with Executive Order 12770 (http://www.usaid.gov/policy/ads/300/eo12770.pdf), which established metric usage in Federal Government Programs, including major Federal actions subject to NEPA, and was signed on July 25, 1991, we recommend use of metric units. This could be side-by-side with standard units, or in a single conversion table in the document.

DOIS 05

No Build Alternatives

We encourage the development of no build alternatives consistent with federal guidance and the many lessons learned in floodplain management. In our opinion, the planning documents do not adequately analyze conceptual options such as buy-out programs, and infrastructure abandonment and/or inland migration. This omission should be corrected, particularly in the most threatened areas or in areas that are likely candidates for abandonment should TSP go forward. Our interpretation of available data strongly suggests that some of the land targeted for protection by levees is not worth the cost of the proposed levees. The history of federal involvement in floodplain management is replete with recommendations of buy-outs and other no build scenarios as a valid tool where appropriate. We also acknowledge that delta replenishment and restoration are appropriate for some areas.

DOIS 03: Additional clarification regarding the decision process for plan formulation and the selection of the LCA Plan has been included in the final report. The identification of the coast wide frameworks is primarily a quantitative decision-making process. The number of possible actions and combinations (on the order of 10^{39}), and the study timeframe, caused the study team to focus on specific assessments of subprovince plans rather than individual features. As a result, identification of the best individual features to comprise the near-term effort required a subjective and qualitative assessment. Because no single feature can meet the study objectives, plan formulation focused on evaluating assemblages of restoration features.

DOIS 04: The LCA Main Report and the FPEIS include a conversion table of English and metric units, in addition, all units expressed in the text include metric equivalents.

DOIS 05: The FPEIS includes a discussion of the No Build Alternative as an alternative considered but not carried forward for full evaluation. An abandonment and in-migration strategy would not achieve the LCA Study goals and objectives of reversing the current trend of land loss and ecosystem degradation in the coastal zone. In addition, breaking levees under such a scenario could not happen in light of flood control and navigation concerns. Impacts to existing infrastructure and coastal communities have been evaluated in the Future Without-Project conditions assessment within the FPEIS. In some instances, such as with the Hope Canal restoration feature, the purchase of conservation easements has been considered and included in cost estimates for the construction and implementation of the LCA Plan.

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DOIS 05 (Continued)

In some areas there might be discernable benefits, such as long term cost reductions, human health and environmental benefits, and more, where buy-out programs should be considered. This could include conceptual buy-out programs that do not exist or are not authorized at this time. For example, there is no reason to exclude acquisition of easements, rights of resale, or development rights. Homeowners and small businesses need not abandon all areas at the same time.

We believe that explicit consideration of economic parameters associated with protecting infrastructure in place could enhance the viability of some no build and migrate inland alternatives. For example, understanding the costs for upgrading oil and gas wellheads and pipeline infrastructure for more open water conditions, rebuilding LA Route 1 at a higher grade, or moving facilities and functions now taking place at Port Fourchon inland to Houma, might be useful information to reviewers and decision makers.

The DPEIS is silent about inland migration of infrastructure. The present set of features, which are restricted to stabilizing or restoring every acre possible with river diversions or geomorphic restorations, are not a holistic view, and may not be a fiscally responsible view, of managing these deltaic ecosystems or the people and structures on it. The current planning process is our best opportunity to provide decision-makers and the public with cost estimates for scenarios that include aspects of in-migration and abandonment.

The full range of reasonable alternatives for managing the delta includes no build options. We recommend presenting first-order cost estimates for combinations of abandonment or buyout accompanied by inland migration; evaluated at perhaps two levels of intensity, minor and major in-migration. If it appears that commingling abandonment or buyout and in-migration with the evaluation of the engineered alternatives would create confusion among readers, the DPEIS should explain why the topic is avoided. At a minimum, the DPEIS should: 1) acknowledge such options can be valid in certain areas; 2) estimate costs or a range of costs for various magnitudes of in migration; and 3) evaluate such scenarios separately or with engineered solutions, or explain why such an evaluation can not be presented. We recommend sections S.8, S.9, S.10, S.11, and S.13 be amended accordingly.

Adaptive Management

Adaptive Management (AM) is the optimal approach for ecosystem restoration because there is so much uncertainty associated with this effort. Building in flexibility and making adjustments through analysis and mitigation will be necessary because of the project's complexity.

We suggest framing a more proactive AM approach for the entire program, as well as the overall long-term cumulative goals. The DEIS is primed for this approach in that it already emphases adjustments through several studies over time. We believe that the affected public and environment would be best served by emphasizing AM within short and long term planning and decision making processes, and incorporating AM into the overall analytic framework of the LCA. This would enhance the likelihood that we can reach our long-term goals.

DOIS 06

To successfully implement AM, monitoring must help us determine if the predicted effects are being achieved, or, identify unanticipated consequences. This may mean long term or even permanent, monitoring and analysis in some cases. As the Council on Environmental Quality (CEQ) noted in 1997, agencies do not typically collect long-term data on the environmental impacts of actions. Consequently, there is a need to incorporate the "predict, mitigate,

DOIS 06: Adaptive Management is an essential component of the LCA Plan, as described in both the LCA Plan and Appendix A - S&T Program. The USACE and the local sponsor recognize the need for monitoring and directing research to resolve relevant uncertainties and identify ecosystem response trends, as well as the need to implement the program with flexibility to adapt to and incorporate new information regarding innovative technologies and engineering approaches.

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implement, monitor, and adapt" model into the NEPA process and decision making. This requires monitoring and considers the effects of potential adaptive measures to allow for mid-course corrections, often without requiring new or supplemental NEPA review.

The traditional "predict, mitigate, implement" environmental management model implies a high degree of certainty in the accuracy of the prediction step that often does not exist. The biological, physical, and social systems analyzed in the DPEIS and other materials are complex, which makes it difficult to calculate the potential impacts of an action with absolute certainty. An AM approach to the NEPA process helps to address this uncertainty and to manage any associated environmental risk. It also minimizes the general reluctance to admit that we cannot be sure of the impact of proposed actions

The additional expense associated with the monitoring necessary to successfully implement AM in the LCA is a concern. Funding to implement the AM approach and the commitment to specific responses is critical and should be discussed in the DPEIS.

The AM approach provides the opportunity to combine monitoring and decision making in a way that will ensure we are most likely to meet our environmental protection and societal goals throughout the LCA process.

DOIS 06 (Continued)

Specific Comments

DOIS 07

Figures 1-11, 2-16, 2-17, 3-14, 3-16, and others - The gray shading fields in these figures (and others not itemized) in the DPEIS is not effective at differentiating the map areas to which each refers. We recommend using either color or pattern differentiation.

Figure 1-8 - The vertical axis label and the footnote in the figure are not very legible. Please use a larger font.

DOIS 08

Figure 2-1 – The value of this figure as an aid to communication is unclear to us. The conceptual outcomes are qualitative and linear.

DOIS 09

Figure 3-1 – We recommend either reproducing Frazier's (1967) Figure 1, or revising Figure 3-1 to accurately reproduce Frazier's interpreted delta lobes and terminology. For example, Figure 3-1 mislabels the Maringouin lobe and calls it Teche.

DOIS 10

Figure 3-5 – Figure shows Outer Shoal landward and northeast of Ship shoal, which contradicts the text (third paragraph, page 3-11, section 3.3.1.1). The text description (location) says "Outer Shoal is…..15.53 miles (25 km) **seaward** of ship Shoal on a platform…." Is Outer Shoal seaward of Ship Shoal or is it seaward and SSW of Isle Dernieres.

DOIS 11

Table 2-1 - This table is helpful and should also appear in the summary section.

DOIS 12

Tables 2-8, 2-11, and 2-12 - Table 2-8 has a strange gray scale for print. Tables 2-11 and 2-12 are important graphics, and their utility would be enhanced by adding a thorough explanation of their significance to the text.

DOIS 13

Table 2-21- We recommend adding mention of impacts to benthic resources from dredging State or OCS for RO2.

DOIS 07: The maps are prepared in color and can be viewed as such electronically. Figure 1-8 has been enlarged for better legibility. As part of USACE guidance to reduce printing costs, the LCA FPEIS was printed in black and white, however, color versions of the maps and figures can be viewed on the electronic versions (available in CD), as well as on the website, www.lca.gov.

DOIS 08: The figure simply demonstrates that, conceptually, there are various restoration outcomes with respect to coast wide land building. This graph helps to explain the plan formulation rationale for setting planning scales such as reduce, maintain, increase, and no action.

DOIS 09: Figure 3-1 of the FPEIS and Figure MR-3 in the Main Report have been revised accordingly.

DOIS 10: The description of the location of Outer Shoal is correct.

DOIS 11: Table 2-1 is included in the Chapter 2 of the FPEIS as well as in the summary of the Main Report. Since this table summarizes the plan formulation process and not the analysis of the impacts of the alternatives, the USACE does not believe it is appropriate to include this table in the summary of the FPEIS.

DOIS 12: Additional language has been included in the text in regard to Tables 2-11 and 2-12. The development of alternative near-term plans was based on the identified critical need criteria and the qualitative assessment of each feature in meeting those criteria. Information is presented on how the critical need criteria were applied to create alternative plans and how the individual features fit into each of those alternatives.

DOIS 13: Impacts to benthic resources have been included for the alternative in Table 2-21 of the FPEIS.

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DOIS 14

Table 4-1 – We recommend adding mention of disturbance to benthic habitats caused by dredging on OCS and State waters.

In addition, the Table includes a note that "impacts would be in comparison to nation-wide natural and human multiple use impacts to offshore sand resources." This is misleading. This volume of sand has never been used for either a series of projects in one area or for an individual project. The scale and magnitude of the proposal is precedent setting and may not be readily comparable to existing information.

DOIS 15

Table 4-3 - The table is confusing and could benefit from clarification. For example, it would be useful to explicitly identify the year when the presented values would be reached, or the areal and percent-wise extent of changes. The text discusses changes in percentage but the table discusses acres. Table 4-3 is produced by "numeric desktop model output," which should be explained.

DOIS 16

Pages S-6 through S-9, Section 8 – In our opinion, the summary should be a clean exposition of the big picture. It seems, however, that the summary of the methodology for how the TSP was developed is confusing, and uses a significant amount of jargon. We recommend using a straightforward, plain English explanation of what was done and how the evaluations were made, not just an expansion based on the syntax that is used in following sections.

Terminology and jargon that could either be deleted or explained in plain English include coastwide framework, subprovince framework, restoration feature, strategic requirements, and restoration frameworks may not be familiar to some readers, and should be explained.

Additionally, the text refers to a Phase I and a Phase II but does not define them.

Page S-9, Section 9, first paragraph - The hydrogeomorphic objectives and ecosystem objectives are introduced in this section without explanation or definition. We recommend either adding such text, or referencing the relevant pages in the DPEIS

DOIS 17

Page 1-10, Section 1.4, last paragraph - On the last line, the word "features" should be singular.

DOIS 18

Page 1-17, Section 1.5.2.1.6, second paragraph - The concepts of relative and absolute sea level change are commingled. The second sentence states that scientists think sea level could rise 8 inches in the next 50 years. The next sentence talks about increases in relative sea level. We recommend clarifying that the second sentence is referring to a eustatic sea level change based on the absolute volume of sea water.

Some additional clarification is warranted. The first sentence states that the currently estimated rate of sea level rise is about 1.0 to 1.2 cm per year. However, the third sentence indicates that experts predict a sea level rise of 8 inches over the next 50 years. This is a significantly slower rate than the 1.0-1.2 cm per year mentioned above. Also, please provide a reference for the predicted figure of sea level rise.

DOIS 19

Page 1-18, Section 1.5.2.1.7, first full paragraph - In the second sentence the size range of the hypoxia zone is only given for the period from 1985 to 1992. Figure MR-12 on the next page shows that much higher values occurred in the mid 1990s. This difference should be discussed.

DOIS 14: Cumulative impacts, as described in the Table 4-1, are consistent with 40 CFR 1508.7. "Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and foreseeable future actions...can result from individually minor but collectively significant action taking place over a period of time."

DOIS 15: Table 4-3 has been revised for clarity.

DOIS 16: Additional clarification and reference to critical needs criteria in section 2 has been added. The reader is referred to a discussion of the objectives in the latter part of the FPEIS.

DOIS 17: Text has been corrected.

DOIS 18: Clarifying text has been included in the FPEIS regarding relative and absolute sea level change. There are no figures of predicted sea level rise.

DOIS 19: Additional language regarding hypoxia during the 1990s has been included in the FPEIS. The text has been updated in the Main Report, consistent with Figure MR-12, to read as follows: "For the period between 1985 to 2001, the bottom area of the hypoxic zone ranged from 2,730 to over 7,700 mi^2 (7,070 to over 20,000 km^2)."

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DOIS 20 Page 1-18 and 19, Section 1.5.2.1.8 – We suggest that any data indicating the geographic scale of saltwater intrusion be added to this discussion. Similarly, any information on actual recorded changes in salinity levels in the affected areas would be a valuable addition to this discussion.

DOIS 21 Page 2-28, Section 2.3.6.1, last sentence in section – We note that the text indicates that descriptions of the 79 features are found in section 3.3.6.1., but are unable to locate any such section in the version of the DPEIS submitted for our review.

DOIS 22 Page 2-76, Section 2.7.2, top of the page, second sentence – The sentence "In addressing the critical near-term needs of the coastal ecosystem, the PSMO would have limited effect in achieving this goal" raises some questions. Since annual nitrogen nutrient loading entering the Gulf is referenced, why not calculate some sort of first-order estimate or mass-balance calculation of nutrient capture per acre of wetland restored, or reference a basis upon which one is provided? These figures can't be rigidly quantified, granted, but an attempt is warranted, either here or in Section 4.15 (Gulf Hypoxia). This would provide an incremental qualitative estimate on how much the LCA Plan would contribute to attaining Congress's reduction goals for nutrient input to the Gulf of Mexico.

DOIS 23 Page 2-119, Section 2.12.1, last sentence, first paragraph – We cannot find the referenced section in: "Quantification of future land loss is described in Section 1.5.2.8 Projected Land Change Summary."

DOIS 24 Section 3, Affected Environment – We strongly encourage adding substantive material on meteorology and physical oceanography related to offshore Louisiana. The lack of such information is apparent in the later discussion of environmental effects on physical processes as a result of extraction of material from borrow sites likely to be accessed for shoreline restoration and barrier island rebuilding (in Section 4, Environmental Consequences). We note that the need for numerical modeling to examine these impacts is noted in Appendix D – Louisiana Shoreline Restoration Report. One of the Department's concerns is the effect of extracting large quantities of material from offshore shoals or buried channels and the effects of that extraction on local wave patterns, particularly during storm events.

DOIS 25 Page 3-11, section 3.3.1.1, third paragraph –We note that the description (location) of Outer Shoal appears to contradict itself. The text says that "Outer Shoal is…..15.53 miles (25 km) **seaward** of ship Shoal on a platform…." However, Figure 3-5 shows Outer Shoal landward and NE of Ship Shoal.

DOIS 26 Page 3-44, Section 3.10 - The benthic resources section focus solely on the estuarine environment. In light of the fact that offshore sand sources are part of the overall plan, we recommend that benthic resources in the offshore marine environment be addressed in the historic and existing conditions sections. Although a detailed analysis would be done as individual projects moved forward, the need for a general discussion in the DPIES remains. This applies to most of the resource sections.

DOIS 27 Page 3-44, Section 3.10.1 – We encourage the addition of a description of the offshore benthic environment. The reference below can be used to develop such information. A copy of this document can be made available upon request.

DOIS 20: Section 1 has been deleted and replaced with the following language:

> "Saltwater intrusion occurs when freshwater flows decrease in volume, allowing saltwater from the gulf, which is heavier than freshwater, to move inland or "upstream". Saltwater can then infiltrate fresh groundwater and surface water supplies and damage freshwater ecosystems. The rate of saltwater intrusion depends on the amount of freshwater flows traveling downstream and the water depth in the wetlands, channels, and/or canals. Generally, high-inflow/low-salinity periods occur from late winter to late spring and low-inflow/high-salinity periods from late spring to fall. Saltwater intrusion is the principle factor in the conversion of freshwater habitats to saline habitats. Extreme salinity changes can stress fresh and intermediate marshes to the point where vegetation dies and the wetlands convert into open water (Flynn et. al. 1995).
>
> Vegetation type is commonly used as a long-term indicator of salinity (Louisiana Department of Wildlife, Fur and Refuge Division, U.S. Geological Survey, Biological Resources Division's National W, and Department of Geology and Anthropology, Louisiana State University, 19970601, 1997 Louisiana Coastal Marsh Vegetative Type Map, Geographic NAD83, LDWF, NWRC, LSU (1997) [salinity]: Louisiana Department of Wildlife and Fisheries, Fur and Refuge Division, and the U.S. Geological Survey's National Wetlands Research Center., Lafayette, Louisiana, U.S.). Changes in vegetation patterns are reflective of changes in salinity on a geographic or coastwide scale. Historic and present vegetation patterns are shown on figures 3-11 and 3-12; salinity patterns are discussed in Section 3.4 Salinity Regimes of this report. Changes from fresh to intermediate, intermediate to brackish, and brackish to saline indicate an increase in salinity within that area."

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DOIS 21: The text has been corrected to direct the reader to the correct Section 2 for a description of the 79 restoration features.

DOIS 22: The subject modeling approach was applied to the earlier restoration frameworks, which were far larger in scale than the LCA Plan. Moreover, given that specifics regarding the exact size, location, and operation of the reintroduction features in the LCA Plan will be determined in follow-up feasibility level analyses, it would be somewhat premature to attempt to quantify the potential contribution such measures would have relative to reducing nutrient input to the Gulf of Mexico. As noted, more detailed information on this issue will be provided to the public during the subsequent project-specific NEPA processes for each restoration measure.

DOIS 23: The reference has been changed to Section 1, Projected 2000-2050 Land Change Summary.

DOIS 24: Additional language on meteorology and physical oceanography related to offshore Louisiana has been included in the FDEIS.

DOIS 25: The description of the location of Outer Shoal is correct.

DOIS 26: Benthic resources in the offshore marine environment have been included in the historic and existing conditions of the FPEIS.

DOIS 27: See response to DOIS 26.

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DOIS 27 (Continued)

U.S. Dept. of the Interior. Minerals Management Service. 2004. Issuance of Non-competitive Leases for the Use of Outer Continental Shelf Sand Resources from Ship Shoal, Offshore Central Louisiana for Coastal and Barrier Island Nourishment and Hurricane Levee Construction. Environmental Assessment. U.S. Department of Interior, Minerals Management Service, Herndon, VA. OCS EA MMS 2004-059.

DOIS 28

Sections 3.10 through 3.12, and 4.9 through 4.11 - The Department's Minerals Management Service (MMS) currently has studies underway that will add substantial new information to these sections. While the analysis of the PDEIS is done on a general level it will be invaluable as projects begin to require more site-specific analysis.

DOIS 29

Page 3-48, Section 3.12 - Primary categories of EFH that could be impacted as a result of restoration efforts in the LCA should also include sharks and highly migratory species. We recommend contacting the National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Habitat Conservation Division, in Baton Rouge to ensure that all species are covered.

DOIS 30

Page 3-56, Section 3.14.2.1, first paragraph – The discussion of work by Richard Kesel would benefit from a relevant citation. The last sentence ambiguously talks about "altering" the suspended sediment regime after the New Madrid quake. We recommend increasing the statements' accuracy by saying that the earthquake "increased" suspended sediment loads.

DOIS 31

Page 3-67, Section 3.17.1 – We suggest adding a note that offshore borrow areas also have the potential to contain historic shipwrecks.

DOIS 32

Page 3-79 Section 3.22.2 – Rather than simply state that "A review of Federal and state agencies' databases reveals numerous HTRW sites of concern within the parishes in the LCA area," we recommend that a table identifying them and their locations be added.

DOIS 33

Sections 3.23 and 4.22 – Documentation of socioeconomic and human resources could be improved. The resource discussion could also be improved, and the predictions could be better supported. The addition of an economic model would help quantify the impacts.

The MMS has a good system for quantifying oil and gas industry economic impacts in the LCA and along the entire Gulf coast. We recommend using a similar approach for all LCA planning. MMS and other cooperators with relevant expertise should be able to provide the needed support, given the normal constraints on time and personnel.

DOIS 34

Environmental Justice could be a significant issue in LCA implementation, and should be addressed in sections 3 and 4. At minimum information about economically disadvantaged and minority populations and communities should be included in the socioeconomic section.

DOIS 35

Page 3-81, Section 3.23.3.1 - Broad assertions are made about employment levels and allocation of jobs among occupations with no specificity or quantification. We recommend adding a table that shows employment levels by occupation.

DOIS 36

Page 3-81, Section 3.23.4.1 – We recommend presenting commercial fishery landings data, and valuations, in a table.

DOIS 28: Comment noted. Information generated from these new studies should be forwarded to the USACE upon completion so that the information can be included in site-specific analyses for components of the LCA Plan.

DOIS 29: The discussion of Essential Fish Habitat (EFH) in the FPEIS has been expanded (according to input provided by NMFS team members) to include sharks and highly migratory species.

DOIS 30: A citation for work done by Richard Kesel has been included in the FPEIS, and the text has been revised to state that the earthquake "increased" suspended sediment loads.

DOIS 31: Text has been changed accordingly in the FPEIS.

DOIS 32: A map displaying HTRW sites has been included in the FPEIS.

DOIS 33: Socioeconomic and human resources, including potential economic impacts to the oil and gas industry, will be assessed on a project-specific basis during follow-up feasibility level analyses.

DOIS 34: Environmental justice issues will be assessed on a project-specific basis during follow-up feasibility level analyses. Reference to compliance with EO 12898 described in Section 6 has been included in the FPEIS in sections 3 and 4.

DOIS 35: The FPEIS has been revised to include a table with employment levels by occupation.

DOIS 36: The FPEIS has been revised to include a table with fishery landings data and valuations.

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DOIS 37 Page 3-85, Section 3.23.6.1, second paragraph - Port Fourchon, probably the single most important locale for oil and gas infrastructure in the LCA because of its role as a support base of OCS activity, is omitted from the discussion. We recommend using MMS 5-year lease sale Environmental Impact Statements as a source of information about coastal oil and gas infrastructure in the LCA.

DOIS 38 Page 3-85, Section 3.23.6.1, last full paragraph – We recommend providing references for the monetary and employment level values.

DOIS 39 Page 3-86, Section 3.27.7.1, last sentence, first paragraph - We suggest explaining what is meant by "components" in: "…notable the Henry Hub where the national price of natural gas is set, the Louisiana Offshore Oil Port, and two of the major components of the Nation's Strategic Petroleum Reserve."

DOIS 40 Page 3-86, Section 3.27.7.1, last sentence, last paragraph – We recommend clarifying the sentence: "It provides a significant portion of total U.S. production, and its production is equivalent to a significant portion of total imports and total OPEC imports."

DOIS 41 Section 4 - Cumulative impacts should include restoration projects, both underway and planned. These are current, pending, and planned restoration projects being funded through CWPRA. The volume of these additional restorations should, we anticipate, have significant cumulative impacts, especially as many are planned to use sand from the same areas as the LCA

DOIS 42 Page 4-1, Section 4.0, second paragraph, last sentence – We recommend referencing the regulation for the CEQ 11-step process.

DOIS 43 Page 4-2, Section 4.1.2, second and third paragraphs - Both paragraphs would be improved by identifying the impacts in: "There would be short-term minor-to-moderate adverse impacts associated with construction of restoration features."

DOIS 44 Page 4-19, Section 4.2.2, first paragraph - There is reference to "MMS Louisiana Offshore Sands Task Force." The formal reference to the advisory body is the Louisiana Sand Management Working Group. The group involves a host of federal and state agencies.

DOIS 45 Page 4-19, Section 4.2.2, fourth bullet – We suggest changing text inside the parentheses: "potential for disturbing oil and gas infrastructure (pipelines and rigs)" to "(pipelines, platforms, and other structures)."

DOIS 46 Page 4-20, Section 4.2.4, second bullet – The text mentions that sand contains or covers other natural resources such as minerals, oil, and gas deposits. While this is true, the potential sand borrow site is on the top of the referenced sedimentary package. The shallow sand resources in question cover pipelines and support oil & gas infrastructure (pipelines, platforms, and other structures). Extraction of (federal) offshore sand resources would have to be coordinated with the MMS so as to preclude interruption of existing and future oil and gas structures and pipelines so a to maximize use of potential offshore borrow sites.

DOIS 47 Page 4-20, Section 4.2.4, third bullet – We question the estimate in: "The large volumes of sand required for LCA restoration efforts would significantly alter gulf bottoms over approximately 5,000 to 10,000 acres." MMS's EA (2004 Table 4-1) for the Isles Dernieres restorations and the Morganza levee projects projected the amount of sea bottom disturbed area as between 1,000 and

DOIS 37: Language has been included in the FPEIS regarding the importance of Port Fouchon. The impacts to specific communities such as Port Fouchon will be analyzed in greater detail during the feasibility level analyses, and the referenced FPEIS will be utilized as a source of information.

DOIS 38: A reference has been added citing the study entitled "Economic Impact Assessment Louisiana Coastal Area Comprehensive Coastwide Ecosystem Restoration Study", Section 1.

DOIS 39: A sentence has been added explaining the components.

DOIS 40: Text has been revised for clarity.

DOIS 41: Section 4 describes completed or authorized Federal, state, local and private restoration efforts. It is not the policy of the USACE to discuss studies about projects that have not been authorized for construction. Table 4-8 provides acres created, restored, or protected by such efforts.

DOIS 42: The CEQ handbook on "Considering Cumulative Effects" does not establish new requirements for such analyses. It is not intended and should not be viewed as formal CEQ guidance on this matter, nor are the recommendations in the handbook intended to be legally binding (page iii of the CEQ handbook).

DOIS 43: Additional discussion regarding the impacts associated with construction of restoration features has been included in the text.

DOIS 44: Text has been revised accordingly.

DOIS 45: Text has been revised accordingly.

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DOIS 46: Comment noted. Additional verbiage has been added to the text indicating the extraction of Federal offshore sand resources would be coordinated with the MMS.

DOIS 47: The estimate provided in the LCA report is based on a volumetric calculation combining estimated sediment volume required and some understanding of dredging practice. The estimate of area affected is non-site specific. Knowing that dredge operators typically prefer a minimum face cut of about 10 feet, unless conditions prohibit this, a rough estimate of the potential bottom area affected can be made. This is of course quite variable and the identification of specific borrow areas and material depths will ultimately determine the extent of bottom affected. The determination of these specifics will be documented in the follow on decision and NEPA documents required for construction approval as specified in the report.

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DOIS 47 (Continued)

6,500 acres to acquire 12 million cubic yards (yd^3) given assumed dredge depths, and explains how the calculation was made. We recommend either using the following reference, or substantiating the estimate in the PDEIS:

> U.S. Dept. of the Interior. Minerals Management Service. 2004. Issuance of Non-competitive Leases for the Use of Outer Continental Shelf Sand Resources from Ship Shoal, Offshore Central Louisiana for Coastal and Barrier Island Nourishment and Hurricane Levee Construction. Environmental Assessment. U.S. Department of Interior, Minerals Management Service, Herndon, VA. OCS EA MMS 2004-059.

DOIS 48

Page 4-63, Section 4.10.4, second paragraph – We recommend moving this section to page 4-58, under the discussion of oysters. This text justifies discussing oysters under independent headings in 4.10.

DOIS 49

Page 4-84, Section 4.15.2, first paragraph – The text would be improved if the discussion of modeling also identified the implications of the model results. Specifically, we recommend adding estimates of upper and lower bounds for nitrogen reductions associated with implementing the TSP. We believe that this information is available, because the text says that a team of experts "were assembled to help estimate the effects of the LCA Plan on hypoxia," and that the team developed a modeling approach to estimate extent LCA features reduced nitrogen inputs to the Gulf. We believe that all stakeholders would be better served if this information would be provided now, rather than waiting for such estimates to be "developed at the project level."

DOIS 50

Page 4-84, Section 4.15.3 – We believe that properly designed and managed wetlands would trap nutrients and reduce biochemical oxygen demand. This leads us to question the statement that building and replenishing wetlands by using river reductions at RO1, "would have no direct impacts on hypoxia."

DOIS 51

Page 4-86, Section 4.16.2, second paragraph – We suggest revising the first sentence, which says that a cultural resources evaluation of the proposed wetlands restoration projects would need to be conducted. Evaluation(s) of potential borrow sites should be conducted well in advance of actual dredging (if not already surveyed) to avoid project delays and to increase certainty. It should also be noted in Section 3.17.1, page 3-67, that offshore borrow areas also have the potential to contain historic shipwrecks.

DOIS 52

Page 4-87, Section 4.16.3 – We suggest clarifying that the reason we require cultural resource surveys be completed prior to the commencement of dredging is to avoid the following: "Direct impacts on historic or prehistoric resources may occur at the offshore sand borrow sites if such resources are present."

DOIS 53

Page 4-94, Section 4.19.1 – We suggest adding qualifiers about uncertainty of assertions that air quality in the LCA study area would likely continue to decline in the future. In metropolitan areas such as New Orleans and Baton Rouge, air quality has improved over the last two decades due to implementation of Clean Air Act requirements. In rural areas, however, a trend is more difficult to establish. In general, though, we concur that ambient measurement programs have focused on the urban areas, and that rural air quality may deteriorate due to increased development.

DOIS 48: This section discusses direct impacts to oysters. The paragraph is presently and appropriately a summary of the cumulative impacts to the American Oyster.

DOIS 49: It would be premature to discuss in quantitative terms the potential effects on Gulf hypoxia of the LCA Plan or any other plans, given the remaining uncertainty with respect to the exact size, location, and operation of the various reintroduction features under consideration, as well as the preliminary nature of the nutrient modeling approach itself. As noted in the FPEIS, more detailed information on this issue will be provided to the public during the subsequent project-specific NEPA analysis for each restoration measure.

DOIS 50: We agree that wetlands can remove nutrients. The issue here appears to be over how the word "direct" is defined. For the purposes of NEPA, the Council on Environmental Quality (CEQ) defines "direct" effects as those "which are caused by the action and occur at the same time and place." CEQ defines "indirect" effects as those "which are caused by the action and are later in time…" We believe that the beneficial effects of wetland restoration measures relative to nutrient removal are more accurately characterized as indirect effects.

DOIS 51: Text revised accordingly.

DOIS 52: Recommended sentence has been incorporated in the FPEIS.

DOIS 53: The following text will be added: "The Union of Concerned Scientists predicts that global warming will also increase some health risks in the Gulf Coast region." (http://www.ucsusa.org/global_environment/global_warming/page.cfm?pageID=973)

Letter 75: Dr. Stephen R. Spencer, U.S. Department of the Interior, Mineral Management Service (DOIS)

DOIS 53 (Continued): The ability of the health care system to reduce these health risks in the face of climate change, however, is an important consideration in any projections of vulnerability during the 21st century. The concentration of air pollutants such as ozone is likely to increase in Gulf Coast. Ground-level ozone has been shown to aggravate respiratory illnesses such as asthma, reduce lung function, and induce respiratory inflammation."

Letter 75: Dr. Stephen R. Spencer, U.S. Department of the Interior, Mineral Management Service (DOIS)

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DOIS 54 Page 4-100, Section 4.22.1.1, first sentence – We suggest providing a reference for the statement that a slower growth rate is projected by Louisiana Population Data Center.

DOIS 55 Page 4-101, Section 4.22.2.1 – We recommend discussing the difficulties that would be associated with even simple values, such as upper and lower bounds.

DOIS 56 Page 4-102, Section 4.22.3.2 - It is recommended that information from MMS's latest Multi-Sale EIS (2002) be referenced, particularly some of the copious oil and gas socioeconomic impact data:

> U.S. Dept. of the Interior. Minerals Management Service. 2002. Gulf of Mexico OCS oil and gas lease sales: 2003-2007, Central and Western Planning Areas – final environmental impact statement. 2 vols. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS EIS/EA MMS 2002-052.

DOIS 57 Page 4-107, Section 4.22.6.1 - The section would be improved if it provided quantitative impacts. For example, characterizing a case where all the oil and gas support facilities, business, and residences at Port Fourchon have to be abandoned and moved inland to Houma, or elsewhere, would provide a concrete example of the direct impacts of the "no action" alternative. We suggest that even relatively easy to generate values, such as the aggregate costs of affected facilities, would be beneficial to readers.

DOIS 58 Page 4-109, Section 4.22.7.1, second to last sentence – We suggest clarifying whether or not the statement that "Shell Oil Company estimates that their costs related to crude oil releases from pipelines struck by vessels are in the range of $10,000 to $12,000 per barrel" refers to clean up costs or includes other costs as well.

DOIS 59 Page 4-112, Section 4.22.9 – We suggest referencing where the estimates may be obtained in: "Existing, future without-project damages, and future with-project damages were estimated for each of the subprovinces based on the stages associated with the 100-year storm event."

DOIS 60 Page 4-114, Section 4.22.10.1, first complete sentence on page – For context, we suggest referencing the source of the information, and some quantification of: "Therefore, emergency planners believe that great loss of life would occur should a major storm strike the area."

DOIS 61 Page 4-119, Section 4.22.13.1 – We suggest creating a comparable Section 3 for: "Water Supply." This may simply mean referencing section 3.23.13, Water Resources.

DOIS 62 Page 4-120, Section 4.22.13.1, second paragraph, second-to-last sentence – We suggest adding a plain language explanation of: "…cause saltwater to up-cone form the base of the aquifer…"

DOIS 63 Page 4-134 through 4-138, Section 4.25 – We suggest editing this summary to discuss only those impacts expected if the TSP is implemented. The section is labeled as a summary of impacts for the TSP. The text, however, oscillates between discussions of impacts from the future without project and the TSP.

DOIS 54: Reference is Louisiana Population Data Center. Louisiana Population Projections to 2020. http://lapop.lsu.edu/proj/

DOIS 55: The paragraph currently discusses the difficulties due to the lack of mapping support as well as hydraulic data at the level of analysis needed. These impacts will be analyzed in more detail during the feasibility level analysis.

DOIS 56: These impacts will be analyzed in more detail during the feasibility-level analysis and the MMS referenced EIS will be considered at that stage.

DOIS 57: For this level of analysis, there was not enough detailed information to determine whether or not a specific facility would be abandoned or affected. It is anticipated that at the next phase in the feasibility level of analysis, detailed mapping and GIS information, as well as detailed hydraulic data, will be available so that a more detailed and quantifiable analysis can be made.

DOIS 58: The sentence has been deleted until further clarification can be made. Language has been added to the end of the paragraph regarding the impacts Hurricane Ivan has on the price of crude oil and its effect on the economy.

DOIS 59: A reference to Table 4-6 has been added to

Letter 75: Dr. Stephen R. Spencer, U.S. Department of the Interior, Mineral Management Service (DOIS)

DOIS 63: The discussion of impacts must, necessarily include comparison to the Future Without-Project conditions.

Letter 75: Dr. Stephen R. Spencer, U.S. Department of the Interior, Mineral Management Service (DOIS)

Main Report – Volume 1

Figure MR-12: We suggest increasing the font size. We experienced difficulties reading the vertical axis label and the footnote. DOIS 64

DOIS 65 Section 2.1.1.2, Hypoxia, last paragraph: We suggest expanding the discussion of trends in the hypoxia zone so that the text and figure are consistent. In the second sentence the size range of the hypoxia zone is only given for the period from 1985 to 1992. Figure MR-12 on the next page shows that much higher values occurred in the mid 1990s.

Section 2.1.1.5, second paragraph: We suggest reviewing the sources of data used for this paragraph, and providing references. The first sentence states that the currently estimated rate o sea level rise is about 1.0 to 1.2 cm per year. However, the third sentence states that experts predict a sea level rise of 8 inches over the next 50 years. This is less than half the 1.0-1.2 cm per year rate mentioned above. DOIS 66

DOIS 67 Section 3.3.3. Nearshore and offshore sand resources: This section, particularly the write-up on Terrebonne/Timbalier offshore sand resources, should mention that sand resources in Federal waters are under jurisdiction of the MMS and use of the material will require a lease document/permit from MMS before the material can be accessed.

List of Acronyms: MMS should be identified in this list. DOIS 68

Main Report, Appendix D - Louisiana Shoreline Restoration Report

DOIS 69 Chapter 6.3.4, Effect of Offshore Sand Removal on Coastal Wave Climate: This section as written is very complex and may confuse readers. We suggest adding plain language text, such as:

> Offshore shoals (which represent a major source of sand for coastal restoration and barrier island replenishment) may mitigate the effects of waves on the shoreline, particularly during storm events. Any modification of these shoals, such as dredging large amounts of sand and altering the topography of these features, could result in a change in local wave climate, possibly resulting in waves of increased wave height reaching the coastline. This increase in wave height could actually increase shoreline erosion. This is the reason for undertaking numerical modeling analyses prior to dredging. Modeling using STWAVE, REF DIF S, etc., has shown this to be the case for certain areas on the OCS, even though these features lie outside the local wave base.

Chapter 7.4.2, Offshore Sand Shoals, Ship Shoal: The last two sentences in this paragraph mention the presence of oil and gas infrastructure on the shoal and the possible limiting of dredging activities in the area. It should be mentioned here that the MMS is evaluating the extent of pipeline setbacks and buffer zones around platforms and other oil and gas infrastructu to protect these features. DOIS 70

DOIS 71 Chapter 7.5, Sediment Resource Research and Regional Distribution: The work performed by tl Louisiana Geological Survey in the 1980's was also conducted in conjunction with, and funding from, MMS. The Louisiana/MMS Cooperative Task Force was instrumental in undertaking

DOIS 64: The maps are prepared in color and can be viewed as such electronically.

DOIS 65: We agree that the text should be updated, consistent with Figure MR-12. Accordingly, the text will be changed to read as follows: "For the period between 1985 to 2001, the bottom area of the hypoxic zone ranged from 2,730 to over 7,700 mi^2 (7,070 to over 20,000 km^2)."

DOIS 66: Clarifying text has been included in the Main Report regarding relative and absolute sea level change. See response to DOIS comment #18.

DOIS 67: Text has been revised accordingly.

DOIS 68: MMS has been included in the List of Acronyms.

DOIS 69: Text has been revised accordingly.

DOIS 70: The following statement has been added in Section 7: "MMS is currently evaluating the extent of pipeline setbacks and buffer zones around platforms and other oil and gas infrastructure to protect these features prior to any mining operations."

DOIS 71: In Section 7, text has been revised to read as follows: "Consequently, beginning in the 1980s, the Louisiana Geological Survey in conjunction with the U.S. Geological Survey and MMS began investigating the distribution and character of sand-rich sediment within the shallow stratigraphy (approximately upper 40 ft; 12 m) of the region."

Letter 75: Dr. Stephen R. Spencer, U.S. Department of the Interior, Mineral Management Service (DOIS)

DOIS 71 (Continued)

much of the geological and geophysical work that indicated that Ship Shoal was a viable sand source for nourishment of the nearby barrier islands.

DOIS 72

Chapter D.8, Best Management Practices for Coastal Restoration in Louisiana: This chapter should discuss and elaborate on the most appropriate sand sources for coastal restoration (Outer Continental Shelf (OCS), nearshore, etc.) and lessons learned from using non-compatible sand during previous restoration efforts.

DOIS 73

Chapter D.9, Project Design and Construction Templates: For any areas discussed in this chapter where OCS sand is mentioned as an option, coordination with the MMS and obtaining of a lease document/permit should be noted.

Thank you for the opportunity to provide these supplemental comments. We trust they will be of additional use as you prepare the final documents. If you need additional information or clarification regarding our comments, feel free to contact us at (505) 563-3572.

Sincerely,

Stephen R. Spencer, Ph.D.
Regional Environmental Officer

DOIS 71 (Continued): In Section 7, text has been revised to read as follows: "Additional studies completed by the Louisiana and U.S. Geological Survey and MMS have significantly expanded the knowledge base of sand-rich sediment distributions, and thus have helped develop comprehensive sediment inventories."

DOIS 72: A discussion of the most suitable sand bodies, both nearshore and offshore, are presented in Chapter 7 of the appendix, and this comment regarding Chapter 8 Best Management Practices for Coastal Restoration in Louisiana does not seem appropriate within the context of this chapter. Many of the sand bodies that have been identified to date have been used or are in the process of being used for CWPPRA barrier island projects. The purpose of Chapter 7 is to establish which sedimentary bodies within the overall deltaic stratigraphy are expected to have those characteristics most suitable for shoreline and marsh platform reconstruction.

DOIS 73: There is no mention of specific sand sources in this chapter.

Letter 76: Mr. William A. Sussman, U.S. Department of Transportation Federal Highway Administration (FHA)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
5304 Flanders Dr. Suite A
BATON ROUGE, LOUISIANA 70808

August 16, 2004

IN REPLY REFER TO
Louisiana Coastal Area
LCA), Louisiana - Ecosystem
Restoration Study and
Programmatic Environmental
Impact Statement, July 2004.

Mr. David F. Carney
Chief, Environmental Planning
and Compliance Branch
Planning, Programs, and Project Management Division
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Attention: Mr. Timothy Axtman; Project Manger
Coastal Restoration Branch, CEMVN-PM-C,
and
Dr. William P. Klein; Environmental Manager
Environmental Planning and Compliance Branch; CEMVN-PM-C

Dear Mr. Carney:

Your July 1, 2004 letter transmitted a draft Louisiana Coastal Area (LCA), Louisiana – Ecosystem Restoration Study report and a draft Programmatic Environmental Impact Statement (DPEIS).

FHA 01

The Draft Volume 1: LCA Study – Main Report dated July 2004 provides an extensive over view of the Louisiana Coastal Restoration effort with a Tentatively Selected Plan of recommendations costing just under $2 Billion. It is encouraging to see this effort being pursued.

The following observations are made from a highway transportation view:

It is noted that the implementation of the five near-term critical restoration features identified in the document are still subject to completion of NED/NER analysis, NEPA compliance, and appropriate feasibility-level decision documentation.

The term Ecosystem Restoration Study implies effort to address only plants and animals within their physical environment. (Based upon definition for "ecosystem" as used in the documents Glossary). It is reassuring to note that the purpose of the LDA Study is to also work with both the critical human and natural ecological needs of the coastal area.

FHA 01: Comment noted.

Letter 76: Mr. William A. Sussman, U.S. Department of Transportation Federal Highway Administration (FHA)

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FHA 02 Acronyms listed do not include Federal Highway Administration (FHWA), Louisiana Department of Transportation and Development (LDOTD), or Metropolitan Planning Organizations (MPO). This tends to imply non-involvement in the overall plan preparation in groups that can be affected by the implementation of the plan. The document does indicate that there were opportunities to provide input as well as this draft document phase of NEPA.

FHA 03 Section 4.6 Division of Responsibilities. It is our understanding that the cost for carrying out the plan will be financed through congressional appropriated funding. The non-federal responsibilities will be other than federal funding (exception noted in section 4.6.4 item #4). The cost to adjust the transportation facilities should come out of the ecosystem restoration funding (federal or local) sources, not out of Federal-Aid Highway Trust Funding.

FHA 04 Section 4.7.8 Relocation of Roads, Bridges, Facilities/Utilities, Towns, and Cemeteries indicates that relocations of roads and new bridges have been identified. This list was not found in the document, but it is our understanding that they will be adjusted as part of the ecosystem restoration cost.

FHA 05 If not done already, we encourage the coordination with LDOTD, MPO's, and local governments that have roadway facilities that will or could be affected by the implementation of the Ecosystem Restoration Program. It should be noted that permits are needed from the LDOTD for adjustments or crossings of the State Highway System.

FHA 06 The LDOTD and FHWA are in the process of identifying possible Ecosystem Restoration efforts in the area of proposed new and upgrade roadway projects. The opportunities to minimize impacts and possible benefit both the transportation system and the ecosystem will be explored. Three projects that come to mind are the proposed LA 1 upgrade between Golden Meadow and Port Fourchon , the Houma-Thibodaux Hurricane Evacuation Route between between US 90 and LA 3127, and the proposed up-grade of US 90 to Interstate standards between Raceland and the West Bank Expressway.

Draft Volume 2: Programmatic Environmental Impact Statement

FHA 07 Section 1.8 provides the setting for this document. It is our understanding this tiered NEPA document provides a mechanism to provide direction on how to implement portions of an overall plan within feasible funding levels. Certain near term efforts are identified to be pursued through additional study and analysis processes including additional NEPA documentation for the individually identified efforts.

FHA 08 We look forward to working with the COE/EPA/LADNR and Cooperating agencies to find compatible solutions for the Ecosystem Restoration work efforts and still provide for the human transportation infrastructure. It is noted that under Section 2.3.4 Guiding Principles item #7 that any restoration-induce impacts will be consistent with NEPA in that actions will be taken to avoid, minimize, rectify, reduce, and then, only if necessary, compensate for project-induced impacts. We understand this guiding principle to mean that it will be a Ecosystem Restoration Program responsibility to make adjustments to any affected transportation facilities.

FHA 09 We attempted to find items relating to transportation and NEPA in the index in chapter 8. We gave up using this tool when it appeared that the index was apparently run on a different version of the document.

FHA 02: The acronyms have been added to the FPEIS and LCA Plan.

FHA 03: Concur.

FHA 04: Potentially impacted roads and bridges were identified and preliminary costs for modification/replacement were included in the estimates for each plan component. These costs will be refined during more detailed studies on a project-specific basis and included as project costs for ecosystem restoration and funded accordingly.

FHA 05: We recognize the importance of agency coordination and plan to begin coordination with these entities in the early stages of the next phase of design, on a project-specific basis. We encourage the U.S. DOT to participate in this effort by joining other Federal agencies and becoming a part of the "collocated team" at the USACE, New Orleans District.

FHA 06: Coordination from Federal and state agencies on their respective projects, and the potential adverse or beneficial impact that the agencies could have on restoration efforts, is essential to ensure a successful restoration in the Louisiana coastal area. The USACE and the State of Louisiana encourage all state and Federal agencies to proactively coordinate with them to identify projects, such as the ones that you have referenced, which could impact coastal restoration so that decision makers involved with restoration efforts are aware of their existence and potential impacts or benefits that could arise from their implementation.

FHA 07: Section 1 of the FPEIS "National Environmental Policy Act (NEPA) Requirements" describes how this programmatic analysis of the LCA Plan will provide the general, broad-based programmatic tier for more detailed, feasibility-level, basin-wide or site-specific environmental analysis of individual restoration features of the LCA Plan would be completed.

Letter 76: Mr. William A. Sussman, U.S. Department of Transportation Federal Highway Administration (FHA)

FHA 07 (Continued): Section 2 "Summary of the LCA Plan Components and Implementation Schedule" describes the various individual features of the LCA Plan as well as the implementation recommendations of these features for investigation, design and construction upon approval of feasibility-level decision documents by the Assistant Secretary of the Army (herein after referred to as "contingent authorization") for several components of the LCA Plan.

FHA 08: The USACE and its local cost sponsor will work closely with the Federal, state and local transportation agencies to find compatible solutions for ecosystem restoration and transportation infrastructure. In accordance with 40 CFR part 1508.20 of the NEPA, the District will take appropriate actions to mitigate (avoid, minimize, rectify, reduce, compensate) for project-induced impacts to transportation infrastructure. The USACE and its non-Federal cost-sharing sponsor are responsible for coordination and relocations of any transportation facilities roads, pipelines, etc., that proposed restoration features may impact.

FHA 09: Section 8 Index contains the following references to the National Environmental Policy Act or NEPA: page 8-32 lists page 42 in Chapter 1; page 8-35 lists pages 8, 9, 36, 43, 58, and 108 in Chapter 2; page 8-42 lists page 1 in Chapter 4; page 8-45 lists page 1 in Chapter 5; and page 8-47 lists page 5 in Chapter 6. The index will be revised to include reference to transportation.

Letter 76: Mr. William A. Sussman, U.S. Department of Transportation Federal Highway Administration (FHA)

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Chapter 6 Coordination and Compliance with Environmental Requirements

FHA 10 It is recommended that NEPA and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) be added to Table 6-1.

FHA 11 It is noted in Section 6.1.1 that the individual demonstration projects will be processed with thei own individual NEPA documentation prior to authorization to implement the activities.

FHA 12 Section 6.2 Consistency of the LCA Plan with other efforts.
It is understandable that there be an attempt to find a balance between economic development and coastal restoration and protection. We do question that it falls upon the implementation of the LCA Plan that is being administered by the COE through various study groups to set the standard for balancing coastal restoration and development. It is noted that the COE and cooperating agencies involved with the development of the Ecosystem Restoration Study are heavily invested with carrying out the environmental protection acts established by congress. It would appear that there should be a more balanced representation of interests within any structure to find the balance between the human ecology and the natural ecology. There are numerous factors and influences that go into finding that balance.

It is recommended that the overall programmatic environmental impact statement be limited to carrying out proposed ecosystem actions. It does not appear to be appropriate, to set up under a LCA Study authorized though a Resolution of Federal Committees on Public Works, essentially a land use control plan. Any attempts to develop a land use control plan should go though a State Legislative process.

FHA 13 Section 6.2.3.2 Regulatory Programs Third paragraph selected new highways as an example where specific construction techniques would reduce wetland impacts. It is noted that some construction techniques are more expensive to the taxpayer and the efficient cost effective construction technique needs to be balanced with all of the other factors involved in making decisions.

FHA 14 +Section 6.2.4.1.3 consider the Effects Of Restoration Projects During Permit Review Process:
We agree that the effects of a proposed highway or improvement should be considered in the permit review process, but express a concern that a procedural objection without cause by the Coastal Restoration Division could stop or delay a permit being issued.

FHA 15 It is noted that there will be numerous interaction points between proposed Restoration Projects and the existing highway transportation system. Some of these interaction points may call for costly modifications to the transportation system. We view the modifications as being a restoration project cost without federal aid involvement. There is the possibility that transportation funding could be used to make these modifications with the understanding that a prorate benefit from the overall restoration project could be used as mitigation credits for other highway projects in the area. We assume that if the LDOTD were interested in this approach

FHA 10: The National Environmental Policy Act of 1969 is cited in the right-hand column of Table 6-1. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) has been added to Table 6-1.

FHA 11: Section 1 documents the broad-based programmatic nature of the FPEIS and compliance with the NEPA. It also describes the tiering process whereby this statement will provide the foundation for more site-specific environmental analysis as needed at later dates.

FHA 12: The USACE performed a National Ecosystem Restoration (NER) analysis to determine the restoration needs. A trade-offs analysis will be conducted before construction of restoration features so that decision makers can make well-informed decisions. The state is the local cost-share sponsor responsible for land, easements, rights of way, relocation, and disposal (LERRD).

FHA 13: Comment noted.

FHA 14: Comment noted.

FHA 15: As described in the response to FHA 08, the USACE and its local sponsor would be responsible for project-specific relocations or other necessary types of modifications to transportation system components. The USACE appreciates the opportunity to explore other mutually agreeable approaches for coordinating and dealing with these issues.

Letter 76: Mr. William A. Sussman, U.S. Department of Transportation Federal Highway Administration (FHA)

they would be looking at a cost effective wetland banking arrangement. We are available to explore this approach if the various parties involved are interested.

Sincerely yours,

William A. Sussmann
Division Administrator

Letter 77: Mr. Miguel Flores, U.S. Environmental Protection Agency (EPA)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

FM-C

AUG 23 2004

Colonel Peter J. Rowan
New Orleans District
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Colonel Rowan:

In accordance with the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the Environmental Protection Agency (EPA) Region 6 has reviewed the July 2004, draft programmatic environmental impact statement (PEIS) for the Louisiana Coastal Area (LCA) Ecosystem Restoration Study. As a Cooperating Agency in the development of the LCA Study, we offer the following comments as part of our ongoing effort to help develop the most effective restoration plan for coastal Louisiana.

EPA 01

We commend the Corps of Engineers (Corps) for the collaborative approach used thus far in the LCA Study process. Your efforts to involve managers from EPA and other Federal and State agencies from the outset of this effort have helped establish the keystone strategies that form the basis of the LCA Study. By hosting the interagency co-located restoration team in the New Orleans District, the Corps has leveraged the expertise of a variety of different agencies, and has facilitated the staff-level collaboration needed to meet the ambitious schedule for the LCA Study and draft PEIS. The Corps' emphasis on interagency coordination and communication in this effort has been and will continue to be essential for addressing the complex and challenging environmental issues facing coastal Louisiana.

EPA 02

The Tentatively Selected Plan (TSP) described in the draft PEIS is a good initial step in addressing coastal Louisiana's ongoing wetland losses. We fully support the primary restoration strategies featured in the TSP, namely, river reintroduction and barrier island/shoreline restoration. The TSP contains projects and programs that are needed now and would be needed regardless of whatever large-scale restoration projects are built in the future. We also recognize that full implementation of the TSP would represent only a portion of the total effort needed to adequately address past and ongoing wetland losses in coastal Louisiana. To that end, the large-scale studies and science and technology program called for in the TSP are necessary to help identify the restoration projects that will ultimately be needed for a comprehensive solution to Louisiana's coastal crisis.

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EPA 01: Comment noted.

EPA 02: Comment noted.

Letter 77: Mr. Miguel Flores, U.S. Environmental Protection Agency (EPA)

EPA 03

We have rated the environmental impact of the TSP as LO (Lack of Objections). Of the three alternatives, we strongly prefer the TSP, because while the other two do address important aspects of the coastal loss problem, neither offers the synergistic benefits of the more balanced approach embodied in the TSP. We have rated the adequacy of the draft PEIS as 1 (Adequate). Our early and ongoing involvement in development of the LCA Study has enabled us to address many issues prior to formal release of the draft PEIS. We do, however, have the attached general recommendations and specific comments for improving the TSP and ensuring full compliance with NEPA.

Thanks again for your continued collaboration with EPA on this important effort. We look forward to working with you to develop the final PEIS for the LCA Study and to implement the LCA Plan. If you have any questions or wish to discuss this matter further, please contact me directly at (214) 665-7101 or ask your staff to call John Ettinger, of the Marine and Wetlands Section, at (504) 862-1119.

Sincerely yours,

Miguel I. Flores
Director
Water Quality Protection Division

Enclosure

cc: USFWS, Lafayette, LA
NMFS, Baton Rouge, LA
NRCS, Alexandria, LA
LDNR, Baton Rouge, LA
LDWF, Baton Rouge, LA
LDEQ, Baton Rouge, LA
Governor's Office of Coastal Activities, LA

EPA 03: Comment noted.

Letter 77: Mr. Miguel Flores, U.S. Environmental Protection Agency (EPA)

Environmental Protection Agency
Detailed Comments on LCA Ecosystem Restoration Study
Draft Programmatic Environmental Impact Statement
August 18, 2004

General Recommendations:

1. **The Corps of Engineers (Corps) and State of Louisiana should consider setting an acreage goal for the LCA Plan.**

   The hydrogeomorphic and ecosystem objectives for the LCA Study serve as valuable qualitative guides for the planning process. They are, however, of limited value in helping the public and decisionmakers understand the potential benefits of the TSP and they do not provide the clear, measurable goal(s) needed for monitoring and accountability. The measurement of the net change in wetland acres over time has long served as the fundamental basis for understanding Louisiana's coastal wetland loss problem, as well as the status of the Nation's wetland stock. It follows that efforts to restore coastal Louisiana should in large part be evaluated on the extent to which they restore or prevent the loss of wetland acreage.

   Although the acreage effects of certain restoration measures in the TSP are discussed in the draft PEIS, there is no estimate of the cumulative effect of the TSP in terms of wetland acreage. While we fully appreciate the challenges of estimating net acreage changes at the programmatic level (particularly given the ambitious schedule for the LCA Study process), we nevertheless believe there should be an overall acreage goal for the LCA Plan. Such a goal would most likely be based on an estimate of the cumulative effects of the restoration measures contained in the final LCA Plan. Doing so would help both the public and decisionmakers understand the benefits of the LCA Plan, and it would also be critical for monitoring and adaptive management. Such a goal would also help in evaluating the effects of Louisiana coastal restoration efforts relative to national wetland goals. Finally, estimating the potential acreage effects of the LCA Plan would serve to highlight the remaining need for implementing large-scale restoration measures such as those discussed in the TSP. EPA 04

2. **The Corps and State should review the finding that pipeline transport technology is not sufficiently advanced for inclusion in the TSP.** EPA 05

   Marsh creation in the near-term is essential to address past wetland losses, provide immediate protection to vulnerable areas, and complement the systemic benefits of river reintroduction projects. While the TSP does include some marsh creation, such efforts are limited and presume that sediment transport over long distances is not practicable at this time. Although some questions remain regarding the technology of sediment transport for marsh creation, the LCA Study does not adequately recognize the vast experience in its use, both abroad and in Louisiana, where extensive implementation of this technology has contributed to construction of highways and

1

EPA 04: Benefit information on the 15 critical near-term features that comprise the LCA Plan has been developed using the desktop ecologic models and presented in the Plan Implementation and Conclusions and Recommendations Sections of the Main Report. This model output will provide an initial projection of the wetland building and protection capability of the critical near-term features of the LCA Plan. It will also allow qualitative assessment of the potential habitat quality and nutrient uptake provided by the critical near-term features of plan. The benefit information will allow a comparison of the efficiency and effectiveness of the LCA Plan in comparison to the previously analyzed coast wide frameworks and will be provided in the plan implementation section of the report. Expected acreage gains from components of the LCA Plan will be identified during follow-up feasibility level analyses, and will represent one of several performance measures that will be periodically assessed as part of the Adaptive Management process to determine the success to which 1) the individual LCA Plan components are reversing land loss and ecosystem degradation (project level), and 2) the LCA Plan is reversing land loss and ecosystem degradation (program level).

EPA 05: The USACE has a long history of transporting sediments via pipelines, and there is a considerable degree of certainty on this engineering technique; however, the proposed use of this technique contains higher levels of uncertainty, than the typical pipeline transport technology. The long distance conveyance of sediment for wetland creation at the outfall is an untested and unproved technology. There is considerable difference, both in technique and efficiency, between pumping material and allowing it to stack as a construction base and placing it in a manner conducive to marsh vegetation. The mechanical process of efficient sediment movement may necessitate different processes of placement and use, which are also untested. It may be more beneficial to convey this material at a high liquid fraction, which would have impacts not only on the placement and creation of wetland substrate but on the construction time frame and commitment of dredge plant resources.

Letter 77: Mr. Miguel Flores, U.S. Environmental Protection Agency (EPA)

EPA 05 (Continued)

other features, including wetlands. (See recommendations 3 and 4 for specific examples of where use of this technology should be further considered in the context of the TSP.)

3. **Internal sediment sources should only be used for marsh creation or other restoration measures when external sources are not practicable.**

The Guiding Principles for Plan Formulation (DPEIS 2-8) appropriately state the following with respect to use of internal sediment sources: "Limited sediment availability is one of the constraints on system rehabilitation. Therefore, plan elements including mechanical sediment retrieval and placement may be considered where landscape objectives cannot be met using natural processes. Because sediment mining can contribute to ecosystem degradation in the source area, such alternatives should, to the extent practicable, maximize the use of sediment sources outside the coastal ecosystem (e.g., from the Mississippi River or the Gulf of Mexico)."

EPA 06

However, the description of the Caminada Headland Reach restoration project (DPEIS 2-98) states, "Material for marsh creation would be pumped from interior open-water sites…" This specific project recommendation would appear to contradict the Guiding Principle discussed above, unless it has already been conclusively demonstrated that using external sediment sources would be impracticable. Consistent with our previous comment regarding pipeline transport, we recommend that the use of external sediment sources be fully evaluated in the feasibility study for each applicable project. In the event that external sources are not practicable, the evaluation of internal sediment sources should look closely at the potential for unintended adverse environmental impacts, such as disruptions in sediment transport or other coastal processes, and impacts to aquatic organisms and water quality. This same comment would also apply to the proposed dedicated dredging at Myrtle Grove, unless the marsh creation proposed for that project would be accomplished using materials dredged for the outfall channel. The technology needed to use river sediments to create marsh in the Myrtle Grove project area would likely not differ greatly from that used recently to create building sites in the Myrtle Grove Marina with river sediments.

EPA 07

4. **The Corps and State should reconsider the decision to drop from the TSP the project that would deliver sediments via pipeline to the La Branche wetlands.**

The rationale for eliminating marsh creation in the La Branche wetlands is not clear. Marsh creation has previously been conducted successfully in the La Branche wetlands (albeit with sediments from Lake Pontchartrain), and there is the potential for significant additional marsh creation. Piping sediments from the Mississippi River to the La Branche wetlands would not likely exceed the distances that river sediments have in the past been successfully transported for other purposes. And, while we are not aware of an inventory of the amount of Mississippi River sediments currently available in close proximity to the La Branche wetlands, it would be surprising if there were not sufficient sediments available for marsh creation at a

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EPA 05 (Continued): Such programmatic or contingent inefficiencies, if not identified and resolved, represent potential cost in opportunity to implement other similar features or portions of the restoration program.

EPA 06: As a matter of course, the LCA Plan seeks to return resources (e.g., sediments and nutrients) to the coastal ecosystem wherever possible, rather than shift existing resources within the system to effectuate restoration. Consistent with the guiding principle referenced by EPA, we agree that external sediments should be used whenever practicable. Opportunities to use external sediments will be fully evaluated during the feasibility studies for both "Barataria Basin Barrier shoreline restoration, Caminada Headland, Shell Island," and "Medium diversion at Myrtle Grove with possible dedicated dredging." In addition, the hydrologic evaluations and information developed as a precursor to and in conjunction with the large-scale, long-range Third Delta study will define the capability for sediment transport on a system-wide basis. This review would be conducted as part of the Third Delta study. It is important to note that the beneficial-use program can be linked with the scientific and technological advances derived from the demonstration projects to increase our capabilities for marsh creation and other restoration measures.

EPA 07: We agree that the La Branch wetlands are an essential part of the Lake Pontchartrain ecosystem. However, efforts to restore the La Branch wetlands should begin with the resolution of use conflicts with the landowner and an evaluation of the potential to use Mississippi River waters and/or sediments. The landowner has applied for a permit to allow construction of an airport in the area identified for restoration.

Letter 77: Mr. Miguel Flores, U.S. Environmental Protection Agency (EPA)

EPA 07 (Continued)

useful scale. Given the ecological importance of the La Branche wetlands, their proximity to the Mississippi River, and the success of past marsh creation work in the same area, it would seem that this project would be a prime candidate for inclusion in a near-term plan.

Accordingly, we request that the Corps and State review the rationale for excluding this project from the LCA Study. If it is decided that the project should not be part of the LCA Plan, then further information is needed to justify this decision in the PEIS.

5. **The Corps and State should reconsider the decision to drop the Amite River diversion project from the programmatic authorization category.**

EPA 08

At an estimated cost of $2,855,000, this project offers a relatively inexpensive way to complement the Hope Canal freshwater reintroduction project and, in so doing, increase the near-term restoration benefits to the Maurepas Swamp. Considering those benefits, combined with the lack of technical complexity involved in this project, we suggest that this is not something that should necessarily require the traditional authorization process. Accordingly, we would request that the Corps and State reconsider whether it would be more appropriate to include this project in the programmatic authorization category, either as a stand-alone project, or as a component of an expanded Hope Canal project.

EPA 09

6. **The Corps and State should consider including in the TSP funds for the purchase of conservation easements from willing landowners in the benefit areas of the Maurepas swamp restoration projects.**

The effectiveness of three TSP projects (Hope Canal and Convent/Blind River reintroductions, and the gapping of the Amite River Diversion Canal spoil bank) depends largely upon the extent to which the productivity of the existing trees in the project areas can be restored. It is possible, however, that these same trees could under some circumstances be logged, thereby undermining the subject restoration projects. Moreover, while logging these areas would provide the landowners with a near-term return on their investment, it has the potential to greatly reduce future harvests due to a present lack of natural re-generation.

Fortunately, there may be a solution to this situation that could benefit the private landowner, while also protecting the public investment in restoration. The use of conservation easements (either perpetual or for a set period of time) could provide private landowners with a near-term return on their investment and protect the public investment in long-term restoration of the Maurepas Swamp. Moreover, by helping maintain the conditions necessary for restoration, easements could possibly preserve future opportunities for sustainable silviculture. The use of such easements would, of course, depend upon the willingness of private landowners to restrict logging activities on their land. The landowners would, however, retain ownership, along with rights to other uses that would not necessarily threaten to undermine the restoration projects. For example, such easements could be crafted to allow

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EPA 07 (Continued): The exclusion of features utilizing the delivery of sediment via pipeline was not limited to the La Branche Wetlands site. The rationale for limiting the inclusion of these features in the LCA Plan for reasons of uncertainty was based on the lack of understanding of how the implementation of each feature would affect all the others due to their link to a common source of material. The common use of the Mississippi River as a source of material for these dredging projects has significant implications if the available sediment, or the methodology and rate of acquiring it, is found to be limited. Although the sediment load measurements for the Mississippi River indicate a considerable volume of material being transported, the technology available precludes 100 percent capture of the material. Removal of material from the channel bed and subsequent replenishment of those borrow sites would be required. This has implications for limiting sediment availability and feature implementation as well as potentially affecting channel stability. This also indicates that use of river borne sediments should be a comprehensive and programmatically considered effort. An initial step would be the investigation of the Mississippi River and its available replenishment capacity.

EPA 08: The rationale for determining which restoration features would be recommended for conditional or Congressional approval is primarily centered on the degree to which a feature had existing preliminary engineering and design, as well as NEPA, underway and/or completed, or whether such information already existed for existing projects of a similar nature (e.g., rip-rap on the shores of the MRGO). While we concur that the Amite River Canal Diversion Project is a relatively inexpensive way to complement the Hope Canal fresh water introduction, the project does not yet have preliminary design and engineering specifics in comparison to the five restoration features that are recommended for conditional authorization.

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EPA 08 (Continued): In addition, several of the features recommended for conditional authorization already have initiated or completed the NEPA process, while the Amite River canal diversion feature has not. In light of the lack of technical complexity associated with this restoration feature vs. other features, including some recommended for conditional authorization, the follow-up feasibility study may be completed and construction initiated at the same time as, or perhaps before, the initiation of construction for those features recommended for conditional authorization.

The expansion of the Hope Canal project to incorporate the Amite River feature is a possible approach. However, this may call into question why the Blind River/Convent feature is not being considered in the effort, and ultimately impact the speed of implementation of all the features.

EPA 09: We agree that the purchase of conservation easements from willing landowners could, under some circumstances, help protect the public investment in restoration of the Maurepas Swamp in a way that recognizes the financial needs of private landowners. The current budget estimates for all three LCA projects that would benefit the Maurepas Swamp do include funds for estimated timber values. The potential need for additional protection of existing tree in the project benefit areas will be evaluated during the feasibility studies for the subject projects. If further protection of the existing trees is necessary to ensure the effectiveness of any of the three projects in the Maurepas Swamp, the USACE will propose using the aforementioned funds to purchase conservation easements from willing landowners.

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EPA 09 (Continued)

compatible uses, including oil and gas exploration (subject to existing laws and regulations), fishing, hunting, and trapping.

Given the current interest in logging areas within the Maurepas Swamp and the potential benefits that conservation easements could provide to both landowners and the general public, we would recommend the Corps and State consider including funds for the purchase of conservation easements in the project costs for the Hope Canal and Convent/Blind River reintroductions, and the gapping of the Amite River Diversion spoil bank. (Note: If this recommendation is accepted, the language on page MR-210, under Section 4.7.11 Timber Activity, would need to be changed accordingly.)

EPA 10

7. **The Corps and State should consider including the Davis Pond and Caernarvon re-authorization projects in the programmatic authorization category.**

At an estimated cost of $1,800,000 apiece, each of these projects offers a relatively inexpensive way to increase riverine inputs of sediments, nutrients, and freshwater into areas of critical need. Moreover, these projects would not involve the considerable challenges associated with designing and constructing new diversion structures. In a time of budget constraints and urgent restoration needs, maximizing the ecological benefit of existing restoration projects should be a priority. As Congress has already authorized both structures, it would seem that this would be a prime example of where it might be appropriate to use programmatic authorization.

EPA 11

8. **The PEIS should provide more information on the relationship between the proposed Mississippi River Gulf Outlet (MRGO) Environmental Restoration Features and the remaining question of whether to close the MRGO.**

While we appreciate that this proposed project would have near-term environmental benefits, it would not address the larger and more important question of whether the MRGO should be closed to deep draft navigation. In an effort to help address this broader question, the Corps is currently conducting an economic re-evaluation of the MRGO. Given this ongoing study, we would question the long-term benefits of investing $107,428,000 if there is a possibility that the MRGO could indeed be closed to deep draft navigation in the future. Specifically, the PEIS should clarify whether the environmental benefits of this investment would be the same under a closure scenario or whether eliminating deep draft navigation would reduce wake-induced erosion, thereby reducing the benefits of the shoreline armoring. Clarification should also be provided as to whether the cost of the near-term restoration activities in the TSP would be included in the economic re-evaluation as part of the overall cost of the MRGO. It would seem that the question of closure should not be separated from the near-term restoration activities discussed in the TSP. At a minimum, the PEIS should provide information on the effects (if any) of possible closure on the environmental benefits of the proposed near-term environmental features.

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EPA 10: Salinity control is the primary objective in the existing authorization for both the Caernarvon and Davis Pond projects. At this point in time the possible changes in the operation of either structure are merely conceptual in nature. No specific alternative operational plan has been outlined or investigated. With this in mind the current authorizations and project purposes could provide potential conflicts with a recommendation to use the two projects for expanded ecosystem restoration purposes. The purpose of the decision document would be to determine if a modification of the existing authorizations would be required. The projects are currently operated to maximize oyster productivity in balance with ecosystem enhancement, which may not be an optimal operation scheme for overall coastal restoration. Therefore, trade-off analysis is needed. While it is true that the results of the studies may not require modifications to structures or the existing authorizations, the opposite is also true, which is why we propose them as stand-alone restoration features of the LCA Plan.

EPA 11: The MRGO recommendation in the final LCA Plan would address the most critical needs while continuing to develop a plan for additional restoration features, including marsh creation, freshwater reintroductions, and/or the potential closure or modification of the MRGO channel in consideration of all National interests. The near-term restoration feature proposed in the LCA Plan involves the construction of protective breakwaters along the north bank of the MRGO and along important segments of the southern shoreline of Lake Borgne. These segments are in danger of breaching, and if not quickly addressed, threaten the integrity of the Lake Borgne ecosystem and ability of future efforts to restore other parts of the area's estuaries. In addition, the proposed installation of rocks to constrict the breaches between the MRGO and Lake Borgne, maintain the shoreline of Lake Borgne, and stabilize the north bank of the MRGO is fully consistent with the near-term strategies of the Coast 2050 Plan related to the MRGO.

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EPA 11 (Continued): The USACE recognizes that resolution of the future use of the MRGO is critical in determining the ecosystem restoration measures that can be developed for this part of the coast. For additional response to this comment, see General Response # 1 regarding MRGO.

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9. **The PEIS should more fully describe the effects of the No Action alternative on people, communities, and infrastructure.**

The public and decision-makers should be fully aware of the consequences if no further restoration activities are implemented in coastal Louisiana or if substantial restoration measures are not taken immediately. In assessing the No Action alternative, the PEIS should further discuss how a failure to pursue the near-term and, more importantly, large-scale efforts discussed in the LCA Study would increase the risks to people, communities, and infrastructure in coastal Louisiana. While even the most ambitious restoration projects will not necessarily prevent community disruptions in the future, the difference between action and no action is central for emphasizing the need for significantly increased public spending on local and national restoration interests in coastal Louisiana. At the same time, however, it is important to acknowledge that under even the most optimistic restoration scenario, numerous coastal communities will need to plan for the increased risk of coastal flooding due to continued subsidence, erosion, and sea level rise. EPA 12

Specific Comments:

EPA 13 **DPEIS S-16** – The third sentence of the second full paragraph states that there could be negative impacts to "freshwater supplies to users downstream of medium diversions." It is unclear what such impacts would be. This statement should either be explained or eliminated.

DPEIS 1-11 – The second sentence of section 1.5.1 reads: "Without action, Louisiana's healthy and highly productive coastal ecosystem…is not sustainable." While we understand and agree with the overall message of this sentence, it is not accurate to refer to Louisiana's coastal ecosystem as "healthy." Indeed, it is the massive disruption of this ecosystem that is the basis of the need for intensive restoration efforts. We recommend deleting the word "healthy." EPA 14

EPA 15 **DPEIS 2-4** – Correction: EPA's Federal Principals Group representative was from EPA Headquarters, not Region 6.

DPEIS 2-75 – In order to more accurately characterize the discussion of the hypoxia Action Plan, we recommend deleting the last paragraph on page 2-75 and replacing it with the following: "The effectiveness of the TSP in achieving Ecosystem Objective 2 has also been taken into account. The Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico (Action Plan) states that the best current science indicates that efforts to reduce nutrient loadings in the Mississippi River Basin should be aimed at achieving a 30% reduction (from the average discharge in the 1980-1996 time frame) in nitrogen discharges to the Gulf (on a 5-year running average) to be consistent with the Coastal Goal for reducing the areal extent of hypoxia in the Gulf. Based on an average annual loading of 1.6 million metric tons (CENR 2000), a 30 percent reduction would be 480,000 metric tons annually. The TSP would make a small contribution towards meeting this goal. However, the knowledge gained from EPA 16

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EPA 12: The FPEIS sections involving effects of the No Action Alternative for Population and Infrastructure have been augmented.

EPA 13: Most fresh surface water supplies would be from the Mississippi and Atchafalaya Rivers and their distributaries in the future. There is a very low probability that salinities may increase downstream of medium diversions and influence freshwater supplies. The medium diversions along the Mississippi River under Alternative Plan B may reduce freshwater supplies to users downstream. Alternative Plan B would increase flows into receiving areas of Subprovinces 1 and 2, Bayou Lafourche and the Terrebonne marshes, which would increase freshwater supplies to these users. Alternative Plan D would have negligible impacts. The LCA Plan would have impacts similar to Alternative Plan B.

EPA 14: Concur. The word "healthy" has been deleted.

EPA 15: The FPEIS has been changed accordingly.

EPA 16: Concur. The FPEIS has been changed accordingly.

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EPA 16 (Continued)

implementation of the projects in the TSP and from the large-scale studies could greatly facilitate the implementation of relatively larger river reintroduction projects, which could provide greater benefits in terms of reducing Gulf hypoxia."

EPA 17

DPEIS 2-104 – There is a confusing reference to the AAHUs associated with barrier island reaches. It is not clear why this is included in a discussion of Bayou Lafourche. The same comment applies to MR-173.

EPA 18

DPEIS 2-113 -- We recommend adding the following clarifying sentence after the first sentence in the last paragraph: "Funds from the Beneficial Use Dredge Material Program would be used for restoration activities that are above and beyond what would otherwise be funded by the Corps O&M program."

EPA 19

DPEIS 4-94 – The first sentence of the first paragraph under "Air Quality" reads: "Air quality would continue to be subject to institutional recognition and further regulations." What is "institutional recognition" and what "further regulations" are being referenced? This sentence needs to be clarified.

EPA 20

DPEIS 4-113 – The first paragraph under 4.22.9.4 states: "the small Bayou Lafourche reintroduction could cause localized flooding..." What potential flooding is being referenced? It is important to note that this and any other diversion would be designed, implemented, and operated in a way that minimizes as much as possible any potential for increased flooding.

EPA 21

DPEIS 4-135 – The last sentence of the first paragraph reads: "Salinity regimes would be similar to the future-without project conditions, except there would be localized freshening in the following areas: Lake Borgne, the northern part of Breton Sound, Caminada Bay and the nearby headland areas, and the upper reaches of Terrebonne and Timbalier Bays and marshes directly north of these bays." This seems to understate the potential effects of the proposed Myrtle Grove diversion, as well as the re-authorization of Davis Pond, both or either of which could potentially have significant freshening effects. We recommend reviewing this statement and changing as necessary.

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EPA 17: This section has been corrected in the final report.

EPA 18: Concur. The recommended edit has been made to the final report.

EPA 19: "Institutional recognition" is the phrase typically used in impacts analysis descriptions that refer to various Federal, state, and local statutes, laws, Executive Orders, policies, rules, and regulations that recognize the importance of a significant resource and provide legal mandates for regulating, protecting, or otherwise dealing with potential adverse impacts to that resource. In this instance, institutional recognition regarding air quality refers to the Clean Air Act and similar type of laws, Executive Orders, rules, etc. "Further regulations" refers to the future potential need for additional air quality regulations. Due to the highly likely increases in human populations, number of cars, industrial complexes, and other air polluting entities, the phrase is appropriately used. Hence no change to verbiage is necessary.

EPA 20: The subject language regarding possible flooding has been deleted.

EPA 21: The statement is consistent with modeling results of salinity changes.

Letter 78: Mr. Joseph I. Vincent (JIV)

July 17, 2004
509 Third Avenue
Harvey, La. 70058

"The configuration of our environment is a by-product of the developer's pursuit of profit." – Peter Seidel, 2001

"This we know, Earth does not belong to man. Man belongs to Earth. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself." – Chief Seattle, 1852

"It's disturbing to see how neatly nationalism dovetails into fascism… Can we find it in ourselves to love a *land* instead of just patrolling a territory?" – Arundhati Roy, 5/6/02

"If you're living in a group, it will help neither them nor you if you set about eating your fellows… The oxygen in the air is generated by green plants. They vent it into the atmosphere and we animals greedily breathe it in." – Carl Sagan & Ann Druyan, 1992

"Only after the last tree has been cut down, only after the last river has been poisoned, only after the last fish has been caught, only then will you find that money cannot be eaten." – Cree Indian prophesy

Col. Peter J. Rowan
New Orleans District
U. S. Army Corps of Engineers
P. O. Box 60267
NOLA 70160-0267

La. Dept. of Environmental Quality
Office of Water Resources
Water Pollution Control Division
P. O. Box 82215
B. R., La. 70804-2215

La. Dept. of Natural Resources
Coastal Management Division
P. O. Box 44487
B. R., La. 70804-4487

La. Dept. of Wildlife & Fisheries
P. O. Box 98000
B. R., La. 70898-9000

U. S. Fish & Wildlife Service
646 Cajundome Blvd., #400
Lafayette, La. 70506-4290

National Marine Fisheries Service
Habitat Conservation Division
c/o LSU Center for Wetlands Research
Baton Rouge, La. 70803-7535

Attn.: William P. Klein, Jr. & Timothy Axtman
U. S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, La. 70160

Dear Sir(s) or Madam(s):

I am writing today in regard to the Draft Programmatic Environmental Impact Statement for the Louisiana Coastal Area (LCA) Study, dated July, 2004. My comments will center on Volumes I & II, and I ask that they be made a permanent part of the final EIS. I also reserve the right to amend or add to these comments after attending one of the public meetings scheduled in connection with the study.

First of all, I do want to express my appreciation to all of those people within the Corps and without who have spent an enormous amount of time and effort in what I hope will eventually be a solution, if only a partial solution to the problem of the disappearance of Louisiana's coastal wetlands. I also wish to express my contempt for and dissatisfaction with those who have participated in an effort to either undermine this effort completely, or to force the old "business as usual" mentality on its design, purpose and execution. Those people most to blame for the loss of our wetlands will be the same people to blame if this plan is either sabotaged altogether or made to fit into their destructivist plans.

Letter 78: Mr. Joseph I. Vincent (JIV)

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I will now proceed to go through the first 2 volumes of the study, and provide running commentary and comments as those points I find to be important, good, bad, or otherwise are presented in the text. Those of you who have been most intimately involved with the formulation of the study and plans know far better than I that we need a far broader and longer-range plan than this, and that we must continue to fight for both funding therefor, and against the continued intentional destruction of Louisiana's wetlands.

JIV 01 Vol. I, Main Report, p. MR-14 – Under 1.6.1, the inference that one of the primary objectives of Louisiana's Coastal Zone Management Plan was to "ensure that future development activities within the coastal area would be accomplished with the greatest benefit and the least amount of environmental damage" is so incorrect, that it may be considered to be a lie. The State of Louisiana has never had the slightest intention of causing the least amount of environmental damage in either its coastal or any other wetlands. The proof is as overwhelming as a tidal wave. Look only at the percentage/number of wetlands-destructive projects that have ever been disallowed (last count I had was a grand total of 20 in the entire history of CZM), at the permitting of destruction of coastal wetlands in West Cote Blanche Bay next to a CWPPRA project, the permitting of a "Venetian" style development that cut canals through barrier island wetlands on Grand Isle, the latest New Iberia Ship Channel fiasco, all of St. Tammany Parish, Terrebonne Parish, Jefferson Parish, St. Charles Parish, Cameron Parish, St. Bernard Parish, and on and on and on and on. And the paltry payment made to destroy wetlands compared to the cost-per-acre figures given in this study.

JIV 02 **MR-15 – "the BTNEP is a partnership for …protection of the watershed from further degradation". How is this accomplished? The BTNEP creation process lasted 5 years. I participated on behalf of the Sierra Club during the** fifth year. I well remember Governor Foster's total ignorance of the process when he showed up an hour late, and for a total of 2 minutes, at the signing ceremony. I well remember that there was to be only $400,000 per year funding from EPA, and that EPA's representative at the signing ceremony did not answer any of my questions abo the program. I well remember that the only thing concrete that BTNEP was actually going to do was make it easier for would-be destroyers of wetlands in the estuary to get permits more quickly, and to "gather data". So I would love to hear just how BTNEP has protected the watershed from further degradation. Please include all such information in the Final EIS.

JIV 03 MR-26 – Under "Human Activities Influencing Coastal Land Loss and Ecosystem Degradation", there is an entire section missing, which should be numbered 2.1.2.4, and titled something like "Subdivisions, Marinas, Bulkheads, Marsh Management, etc."

JIV 04 MR-53 – "Coastal land losses have, and will continue to have, a negative effect on the extensive pipeline network located in coastal areas." Undoubtedly true. However, the reverse is far "truer" – the extensive pipeline network located in coastal areas has, and will continue to have, a negative effect on coastal land losses. In this very study, it is admitted that oil and gas activities have contributed to 32-33% of all coastal land loss (in fact, they have undoubtedly caused 40% or more of such losses). Any pipeline losses due to coastal erosion are miniscule by comparison, and none of Louisiana's coastal wetlands have moved their corporate headquarters to the Cayman Islands, the Bahamas, or even Houston.

JIV 05 MR-57 – While I agree that our coastal and other wetlands are incredibly rich biologically, shouldn't the statement "The study area is also rich in renewable resources and serves as home to thousands of wildlife species that attract individuals for many types of recreational activities" be modified to read "dozens of wildlife species", or at the most, "hundreds of wildlife species"? If by "species" we are including benthic and microscopic organisms, **then the statement as written is correct. But once you say that the species involved attract individuals for recreational activities, then one must assume the individuals attracted in question are of the species "homo sapiens", and there** are not thousands of species that attract homo sapiens.

JIV 06 MR-59 – Here, too "thousands of cultural resources" seems overstated, unless every arrowhead or piece of broken Indian pottery is to be counted.

JIV 07 MR-74 – The paragraph beginning with the words "Develop behavioral analysis databases" appears to be a lot of fresh manure. The next paragraph may also be eliminated, and replaced by the words "Develop common sense."

JIV 08 MR-75 –The definition of "efficiency" and its consequences are of the utmost import. The most cost-effective plan is irrelevant in this context. Nor is the federal government in any way concerned therewith. Look at $36 million dollars spent in Tongass National Forest to extract $1.2 million worth of timber. Look at the New River Canal dredging project. Look at Iraq. No, the most cost-effective project is that which accomplishes coastal restoration vi restoration of natural sediment-building processes with the least amount of money being stolen by the politicians and contractors involved, and with the least amount of multi-million dollar studies that are in fact only a re-numbering of pages.

JIV 09 The definition of "acceptability" is fatally flawed once it declares "acceptability" to be the workability and viability of the alternative plan with respect to state and local entities and public policies. No, "acceptable" is only

JIV 01: Comment noted.

JIV 02: On September 13, 1990, the EPA and the State of Louisiana committed to a cooperative agreement under the National Estuary Program to form the Barataria-Terrebonne National Estuary Program. The program's charter was to develop a coalition of government, private, and commercial interests for the preservation of the Barataria and Terrebonne basins by: identifying problems, assessing trends, designing pollution control, developing resource management strategies, recommending corrective actions, and seeking implementation commitments (http://www.btnep.org/default.asp?id=115).

JIV 03: Comment noted. Verbiage has been included in the text regarding development in the coastal area.

JIV 04: Comment noted. The Main Report does not state that oil and gas activities have contributed to 32 percent-33 percent of all coastal land loss.

JIV 05: Statement will be reworded to indicate hundreds of wildlife species.

JIV 06: Comment noted.

JIV 07: Comment noted.

JIV 08: Comment noted.

JIV 09: Comment noted.

Letter 78: Mr. Joseph I. Vincent (JIV)

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JIV 09 Continued

that which is correct from the standpoint of science and engineering, and which includes no political entities, unless they divest themselves of purely economic self-gain. On such a low scale of human activity, it will be difficult to find politicians willing to understand that the more natural a system, the greater the long-term economic benefit, because their pockets may not be there to be filled over the long-term. It has always been "public policy" in Louisiana to push for the most destruction of wetlands as is physically possible, with the utmost speed and the least amount of oversight. It is also for that reason that local interests, in particular, may have to be forced to accept what is best. We all know that in Louisiana some 40% of the populace is functionally illiterate, that people watch "Oprah", but don't read books, that people believe in false prophets like Jimmy Swaggart, and would still elect Edwin Edwards governor is given the chance. So again, only that is "acceptable" what is correct both as a matter of fact, correct as it applies to the real world (i.e., the physical world of life and death), and is morally correct (i.e., devoid of political maneuvering and theft of public funds).

JIV 10

MR-78 – As I have already indicated, environmental solutions by their very nature support "human development activities", but, too often, the reverse is not true. And where it is not true, humans simply make asses of themselves, and put themselves in the exact type of predicament in which we find ourselves today with regard to the loss of our coastline. If it ever took a genius to figure that out, it certainly no longer does, yet we continue to read the same old B.S. about "seeking balance and synergy". This is no more than Bush-type doublespeak like "Clear Skies Initiative" and "Healthy Forest Initiative" and "a little arsenic and mercury are good for you" and "scientific studies are just a bunch of red tape". Without a sustainable environment, all other "problems" are a moot point.

JIV 11

MR-88 & 89 – I had some trouble with this, because of the "reduce" category, and because of something like "sediment delivery via pipeline at Central Wetlands", whose framework is "reduce", "maintain" and "increase". Hopefully, I am interpreting this correctly to mean that any of three scenarios is acceptable: to reduce the overall coastal/wetlands losses, to maintain the current wetlands acreage, or to increase the amount of wetlands at the particular site. If that is incorrect, please clarify in the Final EIS. Also, clarify how these scenarios will relate to fresh water diversion, salinities, marsh/wetland types to be created, etc.

JIV 12

MR-100 – More of the same problem as @ pp. 88-89, where in Subprovince 3 just about everything is "reduce". Why no "maintain" or "increase"?

JIV 13

MR-106 – Re: diversion of water through the Inner Harbor Navigation Channel – wouldn't a harbor area be expected to be full of pollutants?

JIV 14

MR-114 – Just a little English language problem – "…oilfield canals, which have greatly altering…". Should this read "been altering" or "altered"?

JIV 15

MR-117 – If the Atchafalaya Navigation Channel route through the delta has been identified as the greatest impediment to the delta's growth, why is the relocation of the channel not a part of the selected plan? The alternate route is not far away, no human settlements, no economic loss or risk. This seems something important enough not to be left until later.

JIV 16

MR-122 – Here, too, the modification of the Cameron-Creole watershed structures appears to be a very important consideration, and if for whatever reason it cannot be worked into the selected plan, surely it is not so difficult or expensive that local government or private sponsors cannot come up with the funding for immediate implementation.

JIV 17

MR-130 – Again, relocation of the Atchafalaya Navigation Channel should be a part of the selected plan.

JIV 18

MR-131 – Sediment delivery via pipeline at La Branche wetlands was a restoration feature eliminated because of "uncertainties about science and technology and engineering understanding of processes", yet just such restoration has already been successfully accomplished in the LaBranche wetlands adjacent to I-10 (???). Slightly further down, for the same reason, backfilling of pipeline canals was eliminated, although many pipeline canals have already been backfilled, and oilfield canals have even been backfilled or plugged in the Jean Lafitte National Historical Park and Preserve's Barataria unit. Are you serious in saying this is something too difficult to figure out?

JIV 19

MR-152 – I would find it hard to argue with this list, but would also comment that #s 14 & 15 (Caernarvon and David Pond diversions) are something the Corps can do now. Just do it. #10 – gapping the banks of the Amite River Diversion Canal – is also a project that can easily be done by Parish governments, although there would understandably have to be careful oversight of the process to stop those governments from actually draining wetlands or impeding natural sheet flow in wetlands.

JIV 20

MR-154 – Same comments as p. MR-152 above.

JIV 21

MR-161 – Ah, yes, one of the real bears – MRGO. "During construction of the MRGO, dredging and filling destroyed more than 17,000 acres of wetlands." "Annual erosion rates…along the MRGO result in the direct loss of approximately 100 acres of shoreline brackish marsh every year and additional losses of interior wetlands and shallow ponds…" So well over 20,000 acres lost from this one project. And just what does the selected plan propose

JIV 10: Comment noted.

JIV 11: Comment noted. Your interpretation is correct.

JIV 12: Alternative array 7002 would provide a maintain-level of restoration. However the analysis indicated this would only appear to be cost effective if the absolute maximum attainable environmental output were desired. This level of output is also shown in figure MR-29 to insure an extremely large increase in cost for a relatively small increase in total output. The single maintain-level plan for Subprovince 3 incorporated every feature, at the largest possible scale, that had been identified by the study team. Development of an enhance-level of restoration in Subprovince 3 was not possible due to a lack of sufficient resources. Much of the fresh water and sediment resource available in Subprovince 3 is already producing positive environmental output and therefore increasing the efficiency of these resources is the only available option.

JIV 13: It is national policy that the Federal government, in the design, construction, management, operation, and maintenance of its facilities, shall comply with all Federal, state, interstate, and local requirements in the same manner and extent as other entities. All applicable regulations, e.g. the Clean Water Act, would be followed to ensure the protection of the chemical, physical, and biological integrity of waters of the U.S. potentially impacted by a proposed project. Furthermore, an environmental analysis and water quality certificate from the state would be required prior to implementing any diversion. In addition, monitoring of water quality would be accomplished once a proposed diversion is implemented.

JIV 14: Concur. Statement will be reworded: "...greatly altered..."

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JIV 15: Rerouting the Atchafalaya River Navigation Channel was not considered a critical near-term need by the interagency Project Delivery Team (PDT).

JIV 16: Modifying existing Cameron-Creole watershed structures was not considered a critical near-term need by the interagency PDT.

JIV 17: See response to JIV 15.

JIV 18: Please see General Response #9 regarding sediment transport via pipeline. Furthermore, engineering constraints regarding long distance sediment delivery via pipeline was considered by the interagency PDT sufficient to preclude this project from inclusion in the LCA Plan. Please see Section 3 of the Main Report regarding uncertainties for demonstration projects.

JIV 19: Modifications of the Caernarvon Diversion and the Davis Pond Diversion are included in the LCA Plan for Congressional Authorization. Gapping the banks of the Amite River Diversion Channel is included in the LCA Plan as a near-term critical restoration feature for Congressional Authorization.

JIV 20: See response to JIV 19.

JIV 21: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

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JIV 21 as remediation for those losses and others along Lake Borgne? Actions that over the next 50 years would "protect approximately 6,350 acres of wetlands" at a cost of $107,428,000.00 (p. MR-163), or @ $17,000.00 per acre. Just in monetary terms, the MRGO project has already robbed U.S. citizens of well over $340,000,000 (over 20K acres of wetlands @ $17K per acre). I don't think we're getting much of a deal here. In fact, this looks like "Bushmatics" pure and simple. I'll bet if we can get Halliburton some contracts, it'll all work out. This feature is entirely insufficient.

MR-164 – "The degradation and potential loss of cypress/tupelo swamp is significant because tree regeneration to replace those portions of the swamp that experience a die-off can take several decades, at a minimum." This is a scientifically correct statement, but if we follow the previously given advice on "acceptability", there will be no such wetlands left (back to P. MR-75). Jefferson Parish has stands of such wetlands both within and without its levee system, and it is pushing as hard as possible to destroy them. Some are in the area bought to enrich speculators who were balking about having to "mitigate" for destroying wetlands adjacent to Jean Lafitte National Park & Preserve. That entire wetland system could be restored using natural processes. Instead, Jefferson Parish sees it as a golden opportunity to spread millions of dollars around to the same old clique – dollars that will be taken from taxpayers who live in unincorporated areas of the Parish. Those taxpayers will get to pay for the destruction of their natural heritage and the further degradation of their national park. The Corps has already permitted a levee costing over $9,000,000.00 in the Rosethorn area, although all of the property, residential and commercial, within the area has an assessed value of only $5,400,000.00, and contains cypress-tupelo wetlands. The Corps has just permitted a levee in the Barataria area to encompass some 300 acres of uninhabited wetlands, again to the delight of the Jefferson Parish Council. We in the Sierra Club have been fighting an illegal Jefferson Parish levee used to drain cypress-tupelo swamp in Crown Point for +- 20 years, and the fight continues. The Corps allowed 835 acres of cypress/tupelo swamp to be dredged to a depth of up to 25 feet, supposedly for fill material for the West Jefferson Hurricane Protection Levee, although both a far less damaging levee alignment and alternate sources of levee material were readily available. So exactly what do you mean when you say that the "degradation and potential loss of cypress/tupelo swamp is significant", yet you continue to encourage it? Is Jefferson Parish bursting at the seams, so there's no alternative? Of course not – the Parish population declined by 25,000 persons between 1975 and 2000. JIV 22

MR-165 – Finally a project that is both truly needed and cost effective. The Hope Canal feature would enhance 36,000 acres of wetlands at a cost of only $1940.00 per acre. The only question then remains – will permits to destroy wetlands in this area continue to be issued? JIV 23

MR-167,170 & 171 – Caminada Headlands and Shell Island Reach. 1,780 acres of wetlands restored at a cost of +- $137,800.00 per acre! These figures show the insanity of allowing projects to destroy wetlands on Grand Isle, and dredging a deeper ship channel for the Port of Iberia. JIV 24

MR-172 & 173 – Small Bayou Lafourche diversion. +- 2,500 acres of wetlands at a cost of $57,200.00 per acre. Some of these costs might be more justified if the predicted beneficial effect to another 10K acres is realized. But again, these figures show just how nutty it is to permit wetlands to be destroyed for whim or an individual's profit. JIV 25

MR-174 & 175 – Myrtle Grove diversion. We see some 18,600 acres of wetlands mentioned on p. MR-174, but this figure somehow jumps to around 28,000 acres on p. MR-175. Taking a figure of 20,000 acres, the cost ends up at +- $11,000.00 per acre. Now remember that DNR sometimes requires payments as low as $4,000.00 per acre as "mitigation", and you again realize that "acceptability" as defined above is unacceptable. At least the National Marine Fisheries Service requests a more realistic figure of $18,000.00 per acre. But again, money in some account is not a wetland. And a wetland with pieces missing is defective, whether or not somebody buys some acreage in an untested "mitigation bank". JIV 26

MR-179-180 – Do I have a better idea? Good question. But the fact remains that Demo project No. 1 could potentially "kill" 800 acres of wetlands at a cost of $15,000.00 per acre. No acreage figure is given for Demo project No. 2. No acreage figure is given for Demo project No. 3 – pipeline canal restoration, although it carries a $20,000,000.00 price tag. Common sense dictates that this money should come from the oil and gas industry, and not from me and you. We didn't cause the damage, and anything we got from those pipelines we also paid for already. JIV 27

MR-181 – We see Ship Shoal mentioned in several places as a potential source of sand for restoration projects, but not one word about the proposed effect of sand mining on the ecology of Ship Shoal itself. Can one presume that an EIS will be prepared and public comment sought before any such activity would occur? JIV 28

MR-182 – Given the estimated costs of other components, the $4,900.00 per acre figure for beneficial use of dredged material appears to be a bargain, particularly if 21,000 acres of new wetlands could actually be created. JIV 29

MR-191 – Re: consistency and coordination between development and coastal restoration and protection efforts – **Stop intentional destruction of wetlands. Recognize the fact that the continued existence of a wetland is its highest possible use, and that conversion to <u>any</u> other use results in a loss over the long term.** JIV 30

JIV 22: Comment noted.

JIV 23: Authority for the USACE Regulatory Program includes Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Under Section 10, a USACE permit is required to do any work in, over or under a navigable water of the U.S. Waterbodies have been designated as navigable waters based on their past, present or potential use for transportation for interstate commerce. Under Section 404, a USACE permit is required for the discharge of dredged or fill material into waters of the U.S. Many waterbodies and wetlands in the nation are waters of the U.S. and are subject to the USACE's Section 404 regulatory authority.

JIV 24: Comment noted.

JIV 25: Comment noted.

JIV 26: As noted in the description of this feature, the LCA proposes a Myrtle Grove diversion scaled between 2,500 and 15,000 cfs with the largest scale potentially producing up to 13,000 acres of new emergent marsh. The associated dedicated dredging would produce approximately 5,600 acres of new marsh or marsh platform across the diversion influence area, thus further stabilizing this transitional area of the basin. As stated in the description of this feature, benefits estimated in 2000 draft MRSNFR Study using a community based HEP indicated that this alternative would create 6,000 acres of wetlands with a net gain of 27,970 acres over the 50-year project life.

JIV 27: Comment noted.

JIV 28: An environmental analysis with appropriate NEPA documentation would be prepared regarding potential impacts to Ship Shoal, or any proposed offshore borrow sites, prior to use of material from such site.

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JIV 29: Comment noted.

JIV 30: Comment noted.

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JIV 31 MR-203-204 – Under 4.7.1.4, Wetland creation and restoration easement, how is all of this stuff about habitable structures, mining, drilling, etc. to be reconciled penny for penny and square foot per square foot? Is there a formulary currently in place that will be retained, or will this project produce its own formulary, that will include public involvement?

JIV 32 MR-204 – **Red flag** under 4.7.1.7, Dredged material disposal easement. "…new structures may be constructed as long as they are consistent with the construction, operation and maintenance of the project, ". Who will make this determination? Will new residential subdivisions, truck stops, railroad terminals, Wal-Marts, casinos, sewage treatment plants, etc., etc. be considered to be "consistent", as they are under current DNR, DEQ and Corps operating procedures, or how will such be relegated to the trash heap?

JIV 33 MR-208 – **Red flag the 2nd** under 4.7.9, Minerals. "…surface use… Such approval would be granted if the surface activity does not interfere with the construction, operation, or maintenance of the project." So suppose we've just created wetlands in the Caminada Headlands @ the projected price of $137,800.00 per acre, and an oil company wants to dredge a slip that will destroy 5 acres of wetlands, but maybe won't "interfere" with the project?. Now, does that company get to drill if it agrees to pay $137,800.00 per acre, or do we just blow that off because an oil company's involved? Will there be an EIA done to see whether or not there might be "interference"? Or would the oil company pay the DNR price of $4,000.00 per acre while the taxpayers put up $137,800.00 per acre to repair that damage? Suppose there's an oil spill in the new $137,800.00 per acre wetlands?

JIV 34 Vol. II, Programmatic Environmental Impact Statement, p. DPEIS 1-25 – Section 1.5.2.2.1 – You state that in Louisiana, the majority of wetlands losses are caused indirectly. I vehemently dispute your claim. A good 40% of all wetland losses were caused by oil and gas activity, not even counting brine spills, oil spills, chemical spills, etc. Vast areas were destroyed directly by the dredging of canals to extract timber. Vast areas were destroyed directly for purposes of drainage, navigation, agriculture, highway construction, etc. Vast areas were destroyed for the purpose of building levees, retention ponds, garbage dumps, unsanitary landfills, gravel mining, pumping stations, marinas, boat launches, crawfish and alligator farms, catfish ponds, etc. The greatest intentional destroyers of wetlands today continue to be road construction for the sake of "forced development" and residential construction. Erosion, while certainly a natural process, is of a far different nature now due directly to man's mishandling of the entire continent, not just of the coastal zone. Erosion also once went hand-in-hand with accumulation. To say this is not directly caused by man's activities is akin to saying that the shooter is blameless – the gun did the killing.

JIV 35 DPEIS 1-26 –Navigation – I never want to miss an opportunity to condemn any deepening of the channel for the Port of Iberia.

JIV 36 DPEIS 1-27 – Another attempt to gloss over the enormous damage caused by the oil and gas industry, again sidestepping the direct destruction caused by dredging. If 17,000 acres were destroyed dredging MRGO, how many acres were destroyed dredging 9,500 miles of canals?

JIV 37 Under 1.5.2.3, one finds a false statement "since the 1970s, direct losses have been dealt with through a permitting program….." Direct losses have in no way been dealt with, just partially documented or "noted".

JIV 38 DPEIS 1-28 – Turner (1997 and 2001) claimed that the majority of the loss was due to canals and their direct and secondary impacts. Turner was correct. Turner is lucky he didn't wake up to find himself in Iraq or Afghanistan. John Breaux and Mary Landrieu don't like Turner.

JIV 39 DPEIS 1-30 – 1.5.2.5.3 - 40 acres = slightly less than 16 hectares, not 1,000 hectares.

JIV 40 DPEIS 1-35 – If it is true that one of the primary objectives of the Federal Coastal Management Program was to ensure that future development activities within the coastal area would be accomplished with the greatest benefit and the least amount of environmental damage, then it has been the greatest failure in the history of federal programs, even less successful than the Mexican Border Patrol.

JIV 41 DPEIS 1-36 – As asked in regard to Vol. I, how does BTNEP function for the protection of the Barataria-Terrebonne National Estuary watershed from further degradation?

JIV 42 DPEIS 1-45 – Why is the Gulf Intracoastal Waterway listed under "water resources"? Is this some generalized category, or does it refer to being a resource in terms of coastal restoration?

JIV 43 DPEIS 2-16 – As asked in regard to Vol. I, does "reduce" simply mean "small in scale" or does it refer to "reduce wetlands losses"?

JIV 44 DPEIS 2-18 – Sort of like in regard to Vol. I, what is the significance of the Barataria Basin barrier shoreline restoration being classified as everything from "R1" to "N1"?

JIV 45 DPEIS 3-8 – If it is true that "an important man-made contributor to RSLR (relative sea level rise) is drainage of wetlands for agriculture, flood protection and development", why do you continue to encourage it?

JIV 46 DPEIS 3-27 – Under "Major Mechanisms of Vegetative Change", it is extremely important to keep in mind the National Marine Fisheries Services' report chronicling how the recent deepening of the Port of Iberia's channel has

JIV 31: Consistent with the Uniform Standards of Professional Appraisal Practice, the estimate of just compensation will be based on the difference between the value of the property before the particular easement is acquired and the value of the property after the easement is acquired.

JIV 32: In accordance with the language in the proposed dredged material disposal easement, new structures require written approval, provided that such structures are consistent with the construction, operation and maintenance of a project. The consistency determination will be made by the appropriate representative for the United States and/or the state to ensure that the integrity of the project is not compromised.

JIV 33: As noted in the discussion of proposed estates in Chapter 4 of the Main Report, some estates will prohibit surface use whereas other estates will restrict surface use. The consistency determination will be made by the appropriate representative for the United States and/or the state to ensure that the integrity of the project is not compromised.

JIV 34: "Direct" and "indirect" effects or impacts are defined in 40 CFR 1508.8 as: "Direct effects, which are caused by the action and occur at the same time and place." "Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable."

According to research conducted by Penland et. al. (2000) direct removal was responsible for the loss of about 102,039 acres of wetlands or 14.77 percent of the total of 690,931 acres within the Deltaic Plain. This included oil/gas channels which was responsible for the loss of about 76,978 acres or about 11.4 percent of the total wetlands in the Deltaic Plain; and navigation channels (11,293 acres, 1.63 percent), borrow pits (11,130 acres, 1.61 percent), access channels (1,312 acres, 0.19 percent), burned areas (729 acres, 0.11 percent), sewage ponds (308 acres, 0.04 percent), agricultural ponds (179 acres, 0.03 percent), and

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JIV 34 (Continued): drainage channels (109 acres, 0.02 percent). All other losses in the Deltaic Plain are attributed to erosion at 213,280 acres or 30.87 percent (category includes: natural wave, navigation wave, and channel flow); and submergence at 375,612 acres or 54.36 percent (category includes: altered hydrology due to oil/gas, altered hydrology due to multiple causes, natural waterlogging, failed land reclamation, altered hydrology due to impoundment, altered hydrology due to roads, faulting, and herbivory).

JIV 35: Comment noted.

JIV 36: According to Penland et. al. (2000) oil/gas channels were responsible for the loss of about 76,978 acres or about 11.4 percent of the total wetlands in the Deltaic Plain; see JIV 01.

JIV 37: Comment noted.

JIV 38: Comment noted.

JIV 39: Comment noted. The report will be revised to reflect that 40 acres = 16.1 hectares.

JIV 40: Comment noted.

JIV 41: On September 13, 1990, the EPA and the State of Louisiana committed to a cooperative agreement under the National Estuary Program to form the Barataria-Terrebonne National Estuary Program. The program's charter was to develop a coalition of government, private, and commercial interests for the preservation of the Barataria and Terrebonne basins by identifying problems, assessing trends, designing pollution control, developing resource management strategies, recommending corrective actions, and seeking implementation commitments (http://www.btnep.org/default.asp?id=115).

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JIV 42: This section describes prior studies, reports, and existing water resources projects, such as the Gulf Intracoastal Waterway (GIWW), relevant to the LCA and ecosystem restoration.

JIV 43: "Reduce category" infers a reduction of Louisiana coastal land loss by 50 percent. Maintain category infers no net Louisiana coastal land loss. Enhance category infers an increase in Louisiana coastal land gain by 50 percent. Definition of these terms is presented in the text of the FPEIS.

JIV 44: R1 and M1 are designations for groups of restoration features that compose restoration frameworks for reduce (R) Louisiana coastal land loss by 50 percent or maintain (M) i.e., no net Louisiana coastal land loss.

JIV 45: Historical development activities have resulted in both large scale changes in land use and associated environmental impacts. At present, Federal law requires the USACE to accept and process application for the dredging and fill of wetlands. In addition, when Clean Water Act 404 permits are issued, they require at a minimum one-for-one mitigation for any wetlands impacted.

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basically ruined 8,000 acres of marsh on Vermillion Bay. This is insane enough, yet they want an even deeper channel – from 16 feet to 25 feet. JIV 46

DPEIS 3-30 – "Construction of…deep navigation channels has affected wetland vegetation by changing the marsh hydrology, interrupting sheet flow, inhibiting drainage, altering sediment movement patterns, causing impoundment and flooding, and facilitating saltwater intrusion and increased tidal exchange. If you can make this statement with a straight face, and you have the power to stop such activities without having to spend a penny, well JIV 47

DPEIS 3-38 – Under the definition of "Coastal Live Oak-Hackberry Forest", you not only do not identify hackberry as a dominant canopy species, but you do not even indicate its existence in such a forest anywhere. JIV 48

DPEIS 3-42, 43 & 62 – Untreated sewage enters the storm sewers of both Orleans and Jefferson parishes durin slightly strong rainfall events. Lawn and other fertilizers of all types are sold everywhere, with no monitoring of their use. Thousands and thousands of pounds of pesticides, including those known to kill songbirds for 24 hours after application according to directions, those advertised to kill over 100 species of insects, and those known to be endocrine disrupters and of particular danger to pregnant women and infants, are sold everywhere, in unlimited quantities, and with no supervision whatsoever. In violation of federal law, pesticides are sprayed directly in the offices of the Jefferson Parish Courthouse with workers at their desks working, no ventilation, and with pregnant women and small children present. Worse still, the pesticide and endocrine disrupter atrizine is present unfiltered from the drinking water supply of Jefferson Parish at levels 6 times higher than that shown in laboratory tests to cause deformations in developing leopard frogs. Human embryos pass through the exact same development stage. There is no treatment of urban and suburban runoff and no monitoring of such runoff from parking lots, shopping centers and so-called "Mom-and-Pop" small businesses. Surely, the same situation, if not worse, exists in every part of the State. JIV 49

DPEIS 3-71 – Sorry, but the figures given for expenditures by persons engaged in hunting, fishing and bird watching are totally incorrect. I'd love to meet the fisherman who spent 70 cents on a fishing trip, or the hunter who spent $1.25! Just a bottle of water costs a dollar. A gallon of gasoline costs $2.00. Where do you launch your boat? Where's your hunting lease? These figures must come from some survey done in 1930 or earlier. Just Wednesday past, a friend of mine who owns a boat went fishing, ran from Lafitte to Grand Isle and various points in between looking for where the fish were biting, and spent $130.00, which he split with his friend who went along. We're talking gasoline, food, drinks, launch fees, and a little equipment - $65.00 per man, not 60 cents. No matter what efforts are made to downplay the value of wetlands and the "insignificant" return to the economy, wetlands are of vast importance, and over their lifetime, should they not be destroyed by the shortsighted, they yield a tremendous economic return, and of the type that cannot be replaced. JIV50

DPEIS 3-77 - This information on air quality and the importance of trees to our lives and all life on Earth should be required reading for every elected official, and it should be stressed over and over in our school system, so that children do not grow up to be as stupid as their parents, so that they value the tree, not the chainsaw. Particularly amazing is the info that a tree 10 times greater in diameter removes 70 times as much pollutants from the air, yet in their ignorance, our governing bodies insist on planting small trees, rather than large shade trees, and virtually never require any space for shade trees in huge paved parking lots. JIV 51

DPEIS 3-79 – **A large truth comes out.** .We read earlier in this report that there are 9,500 miles of oil field canals in the State, but here comes the real figure – "Today several hundred thousand miles of pipeline systems extend to virtually all points in the state". How many of those do you think cross wetlands? JIV 52

DPEIS 4-122 – CWPPRA projects cost about $10,000 per acre. JIV 53

DPEIS 4-130 – Just between 1932 and 1990, oil and gas activities destroyed 247,102 acres of wetlands - $2,471,020,000.00 worth. They're paying us back by moving out of Louisiana. JIV 54

DPEIS 4-124 – Supposedly, only 12,355 acres of wetlands were permitted for destruction from 1/1/98 to 10/23/03. How much of the mitigation for such was "paper mitigation"? How much was some sum of money paid, but no wetlands restored or created? How many of these projects had any reason to be sited in wetlands? I believe the answer to the last question to be virtual zero. JIV 55

DPEIS 4-134 – The proposed expansion of the Sabine-Neches Ship Channel is another goofball project that do not have to occur. As far as the East Texas Water Plan, which would basically screw up an entire ecosystem, I'd sa let's do what Dubya does – screw Texas! JIV 56

DPEIS 5-16 – I realize there's no need to comment on the comments of an idiot, yet whenever I hear some jerk say things like "Jefferson's got to grow!" or "Fish and wildlife do not vote or pay taxes", I also realize that I am definitely in favor of the death penalty. JIV 57

DPEIS 5-26 – At the Aug. 6, 2003 stakeholder meeting (Agriculture and Forestry), no one mentioned New Iberia's destruction of marsh on Vermilion Bay via channel dredging. JIV 58

JIV 46: Comment noted.

JIV 47: Comment noted.

JIV 48: Sugarberry is also referred to as hackberry; clarification of this will be so noted in the report.

JIV 49: Comment noted. It is national policy that the Federal government, in the design, construction, management, operation, and maintenance of its facilities, shall comply with all Federal, state, interstate, and local requirements in the same manner and extent as other entities. All applicable regulations, e.g. the Clean Water Act, would be followed to ensure the protection of the chemical, physical, and biological integrity of waters of the U.S. potentially impacted by a proposed project.

JIV 50: The number of participants and the monetary expenditures of sportspersons and wildlife watchers in the State of Louisiana described in the FPEIS were cited from the U.S. Fish and Wildlife Service 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. This citation is provided in the FPEIS.

JIV 51: Comment noted.

JIV 52: This was a typographical error and has been corrected. Statement has been corrected and now reads: "Today, several thousand miles (over 10 thouseand km) of pipeline systems extend to virtually all points in the state."

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JIV 53: Comment noted.

JIV 54: See response to JIV 034.

JIV 55: Comments noted. At present, Federal law requires the USACE to accept and process application for the dredging and fill of wetlands. In addition, when Clean Water Act 404 permits are issued, they require at a minimum one-for-one mitigation for any wetlands impacted.

JIV 56: Comment noted.

JIV 57: Comment noted.

JIV 58: Presentations at LCA stakeholders' meetings were designed to describe proposed draft LCA restoration features and address stakeholder's concerns.

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JIV 59 DPEIS 5-27 – At the Aug. 7, 2003 stakeholder meeting (energy), someone apparently got confused and thought there was some "overburdening of regulations on the industry" rather than on the working class due to billions in tax cuts given to the industry.

JIV 60 DPEIS 5-27 – At the Aug 12 stakeholder meeting (navigation and transportation), someone got confused and thought that the terrible destruction wrought on coastal wetlands via channel dredging meant that there was some need for "improvement of deep draft navigation".

JIV 61 DPEIS 5-28 – At the Aug. 14, 2003 stakeholder meeting (flood control), someone got confused, and wanted to do something about "getting rid of flood control's negative image", when all he/she had to do was propose that flood control stop being used as an excuse to destroy wetlands.

JIV 62 DPEIS 5-30 – At the Aug. 27, 2003 stakeholder meeting, someone got confused, and thought that the permitting system was "not in step with landowners", rather than that many landowners have no respect for the law or for the lives of others.

JIV 63 DPEIS 6-7 thru 15 – Under 6.2.2, there appears to be a blatant attempt to defend "business as usual". Yeah, destroying coastal wetlands is bad, but yeah, destroying coastal wetlands is good. Sorry. There may be residential and commercial construction in the coastal zone, but to site such in wetlands is asinine. There is sufficient high, dry ground on which to build, from which one can commute to the coastal area. Not only does such in the coastal area destroy the very things we insist we must save, but humans are placed in a situation in which their lives will definitely be severely threatened, sooner or later. And they will have carried with them all of the toxic "joys" that accompany humans wherever they go, needed or not.

JIV 64 **It is extremely important** that we get off this mythical "economic development" bullshit horse. Economic development is something that occurs naturally, where and as it is needed. Economic development of the type where you build a highway, you drain a swamp, you build a two-bit subdivision, you talk people to move in, is the wrong type of economic development. You have a business, you make your product better than others, you sell it at a good price, you have the product when somebody comes in to buy it, is the right kind of economic development. You keep the roads you have in repair, you staff the schools with good teachers, you give the teachers the authority to make the decisions in their classrooms, you keep the schools in repair and equipped, you keep the streets safe, you buy home-made and locally made products, you pay decent salaries, you provide good health insurance to your workers, you don't exempt over 60% of all industries from paying taxes, but you don't tax them to death, either. You see to it that the CEO doesn't make 100 times what the average worker makes, you don't cheat your customers or your workers, you don't give sweetheart deals to political cronies, you have ample parks and green space, you keep the air, water and soil in your community clean, you hire people based on qualifications, not on whether they know your cousin Vinny – all of these little things together mean economic development of the right kind, and they're only hard to do when crooks are running the show. And you don't destroy your renewable resources for the short-term gain of the few. In fact, you do nothing at all for the short-term gain of a few, but for the long-term gain of the many. Communism? No, community. Caring. Giving a damn. Not being a liar.

JIV 65 Under "consistency", why is intentional destruction of wetlands for subdivisions, marinas, casinos, truck stops, camps, churches, playgrounds, hospitals, new roads, crawfish farms, alligator farms, etc. not specified here as being inconsistent with the plan? After all, you state that "federal and state actions affecting the coastal environment need to reflect the fundamental premise that it is less expensive and more effective to prevent wetland loss, than it is to repair the damage." That is true, but your very next statement is some kind of Butch Ward-Woody Gagliano fantasy – "The challenge is to find balance between economic growth and wetland protection". Absolute nonsense. These two things are not remotely related, except in the sense that destruction of wetlands means long-term economic loss. Protecting wetlands can only mean economic gain over the long term, because wetlands are living systems that provide the things we actually need to survive. We can clothe ourselves, feed ourselves, drink the water, harvest the fish, plants and animals – as long as we keep the resource from being degraded by our activities. And as long as we do not destroy it, it will for all practical purposes always be there. That cannot be said of anything we choose to put where a wetland is now.

JIV 66 This is not something that requires scientific proof. If it is raining, and we see the drops falling, and feel them hitting us, and see the ground becoming wet, and water starting to drip from the roof, then unless we are dreaming, it is indeed raining. Yet, you still refuse to see the truth. In fact, you blandly state that "Future development will continue to adversely impact Louisiana's coastal wetlands." That is by your choice. That is by your failure to implement the law, although that is your duty, and you are empowered to do so. We don't need to hear any B.S. about the "elected officials". We all know that today, more than ever before in the history of this country, public office is bought, and generally goes to the highest bidder. So it is now more important than ever before that you follow the law. No penny-ante local politician can force you to break the law.

JIV 59: Comment noted.

JIV 60: Comment noted

JIV 61: Comment noted.

JIV 62: Comment noted.

JIV 63: Comment noted.

JIV 64: Comment noted.

JIV 65: Despite past efforts to address the important issue of consistency, it is acknowledged that a more thorough, comprehensive, and balanced effort is needed to ensure consistency across the coast. Once the LCA Plan is approved, it would be the appropriate vehicle for continuing such an effort.

JIV 66: Comment noted.

Letter 78: Mr. Joseph I. Vincent (JIV)

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JIV 67 New highways are now built only to force so-called development. There are no new roads needed to any part of this country. There is no way to prove that any such road is "needed', and what the hell would one build a new road into a wetland for at this stage of the game, if not with the express purpose of destroying it?

JIV 68 Under "Hurricane Protection", you talk about "minimizing wetland impacts", yet your actions belie your words. I have already mentioned your intentionally allowing destruction of over 800 acres of cypress/tupelo swamp on the border of Jean Lafitte National Historical Park & Preserve, in connection with which you also allowed bottomland hardwood wetlands to be leveed and bulldozed for politically connected Jefferson Parish attorneys. You didn't even choose the bad, but better, wetland/non-wetland interface. That decision was in no way, shape or form based on scientific considerations.

JIV 69 Under "Navigation", the unrelenting tide of B.S. rolls on: "Upgrading our navigation system is necessary to ensure the vitality of this critical economic asset". I don't have the strength to do more than call this a pathetic lie designed to continue to drain the federal treasury.

JIV 70 "Best Available Science Tools" – this is getting worse and worse. Are you suggesting that anyone who is not a politician would use science tools that are nor the best available? The Corps, the State, hundreds of environmental organizations, and millions of average U.S. citizens understand the direct, indirect and cumulative effect of wetland permit decisions, and can even name the names of persons who should be executed in public for their roles in the unnecessary destruction of countless millions of acres of our country's wetlands. While I have nothing against the "science tools being developed", stop this damned Dubyaesque dumbspeak! Everything has been perfectly clear for decades. Whoever has decided that "the review of specific permit applications would not be delayed while science tools are being developed" should be neutered. Again and again and again, it's going to be wetlands destruction as usual.

JIV 71 "A CMD authorization is not issued until CRD has indicated that it has no objections to the proposed project." How is CRD's attitude going to be any different from Ron Ventola's?

Encouraging private mitigation banks that support LCA plan objectives sounds like another load of manure.

Under "Enhance Internal Coordination" – Every "development" would affect the entire wetlands system, and permitting any "development" means that spending money on restoration is throwing that money away along with our wetlands.

JIV 72 Under "Encourage and Support Wetland Planning Efforts" – Areas that are "generally suitable" for development are non-wetlands that are not critical habitat for any threatened or endangered species.

JIV 73 Under "Hurricane Protection Projects" – "The District recognizes the importance of ensuring that hurricane protection efforts are consistent with coastal restoration efforts." This must be something totally new as of July, 2004, as there has never before been any evidence of such. Grand Isle is a good example.

JIV 74 And more of this "best available science tools" malarkey – no, give me the worst tools, for Christ's sake. **NOW I GET IT! YOU DID MEAN "WORST TOOLS"!** Otherwise, you'd have never retained the totally false and totally unscientific conclusion that the "guiding principles would also emphasize the benefits of building upon the upland/wetland interface.." Any scientist can tell you that the wetland/non-wetland interface is an extremely important zone for aquatic, semi-aquatic and terrestrial life forms. This is particularly true for amphibians and reptiles, but the riparian zones are heavily used by raccoons, otters, beavers, and other foraging mammals, and these corridors are very important for all land animals that come to the water either to drink or to escape from danger through the swamp. No, the benefits of building on a line at least 100 feet to the uplands side are obvious, such that the myriad creatures that need the transition zone between water and land can use same without being totally out in the open on a levee where even the grass is mowed.

Then you go on to say something that makes sense, but which you don't implement (in Crown Point, for example): "In addition to the issue of avoiding direct wetland impacts, the guiding principles would address the need to avoid hydrologic modifications that could result in indirect and secondary wetland losses." What are you waiting for?

JIV 75 There is much in this study which gives a glimmer of hope, yet much which shows no progress, possible regress, an inability to understand the futility of and harm from destruction of wetlands, a lot of doublespeak and contradiction. In toto, I feel little more than frustration at this point. Please include these comments in the Final EIS, and please notify me of any changes, updates, calls for additional comments, etc.

Yours truly,

Joseph I. Vincent

JIV 67: Comment noted.

JIV 68: Comment noted.

JIV 69: Comment noted.

JIV 70: Comment noted.

JIV 71: The Louisiana Coastal Restoration Division develops, implements, and monitors coastal vegetated wetland restoration, creation and conservation measures. It performs engineering, planning, and monitoring functions essential to successful development and implementation of wetland conservation and restoration plans and projects as directed by the Coastal Wetlands Conservation and Restoration Plan.

The mission of the USACE Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The USACE evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. USACE permits are also necessary for any work, including construction and dredging in the Nation's navigable waters. The USACE balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. During the permit process, the USACE considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the U.S.

Letter 78: Mr. Joseph I. Vincent (JIV)

JIV 71 (Continued): The adverse impacts to the aquatic environment are offset by mitigation requirements, which may include restoring, enhancing creating and preserving aquatic functions and values. The USACE strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public.

JIV 72: Comment noted.

JIV 73: Comment noted.

JIV 74: Comment noted.

JIV 75: Comment noted.

Letter 79: Mr. Allen Ensminger, Wetlands and Wildlife Management Co. (WWM#1)

Allan Ensminger
(337) 462-0762

August 20, 2004

Mr. Tim Axtman
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Axtman,

This letter will serve as additional comments to those made at the Cameron, La. Public Meeting in regard to the LCA Study and the TSP. I also request that comments presented in my letter of May 18, 2004 to Dr. William Klein be considered as a part of these comments.

WWM #1 01

As pointed out in various meetings and in other comments, Pointe au Fer Island is a large privately owned tract of coastal marshland that comprises a true Barrier Island. Existing Coastal Wetland Planning, Protection, and Restoration Act projects have proven to be successful and should serve as demonstration sites for like projects in coastal Louisiana. The shoreline protection section on Point au Fer confirms that "hard structure" has application and provides rapid protection to severely eroding sites.

WWM #1 02

In view of the many comments presented at Public Meeting for the LCA Study and during the development of the Coast 2050 Plan, creating and financing a massive Science and Technology Program with corresponding Demonstration Projects will give the Public the impression that this is a welfare program for academia to study project that have little application to the overall massive coastal land loss problem. Also of great concern is the prospect of having to wait ten years or longer before moving forward on additional projects other than those specifically mentioned in the TSP.

WWM #1 03

I appreciate the opportunity to comment on the LCA Study and look forward to seeing projects implemented under this plan.

Sincerely yours,

Allan B. Ensminger

ABE/me
c.c. Mr. Charles I. Denechaud III, Point au Fer Properties

Wetlands and Wildlife Management Co. ♦ 246 Allan Ensminger Rd. ♦ DeRidder, LA 70634

WWM#1 01: The best available science, technology, and understanding of system function will be used to design and implement specific restoration features. As part of the adaptive management process, results from previous projects (CWPPRA, USACE, LDNR, etc.) will be used to aid in the design of new restoration features, and restoration efforts under the LCA Plan will be coordinated with other programs, including CWPPRA.

WWM#1 02: Comments noted. The foundation of an S&T Program is intended to assist project managers in ensuring that individual project features are coordinated to achieve the overall goals and objectives of the LCA Plan. Additionally, the S&T Program will ensure that restoration is carried out on the best available science is available for restoration. This includes answering relevant uncertainties to ensure that restoration efforts have the highest likelihood of success. The S&T program will include a multi-agency membership including federal and state agencies, tribal governments, and local government representatives. This multi-agency voice will ensure that work carried out through the S&T Program will benefit the LCA Plan as a whole. Also, please see General Response #2 regarding the S&T Program.

WWM#1 03: Please see General Response #5 regarding the ten-year planning horizon and General Response #8 regarding project implementation protocols and the need for immediate action.

Letter 79: Mr. Allen Ensminger, Wetlands and Wildlife Management Co. (WWM#1)

Allan Ensminger
(318) 462-0762

May 18, 2004

Mr. William P. Klein, Jr.
CEMVN-PM-RS
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Klein,

I appreciate the opportunity provided by the Public Meetings regarding the modification of the LCA Study and development of a Near-Term Ecosystem Restoration Plan for the Louisiana Coastal Area Study. My comments in this regard are directed to environmental conditions within the Pontchartrain Basin and in particular those associated with the rapid deterioration of the freshwater marsh and swamp ecosystems located within the La Branche wetlands and those adjacent to the western shore of the lake. I provided oral comments at the meeting held in Lake Charles, La.

I have observed and worked within these wetland areas for the past fifty years and continue to provide wetland-consulting advice to private landowners within this area. In addition to the private services, I serve as a Board Member of the Gulf Coast Joint Venture of the North American Waterfowl Management Plan. Two major proposals to be considered by the North American Waterfowl Management Plan Council will address protection of a portion of the area by shoreline stabilization and acquisition of private property from willing sellers and add these tracts to the existing public Wildlife Management Areas.

Land loss within the western end of the Lake Pontchartrain Basin is a direct result of the increased water salinity allowed into the lake from the Mississippi River Gulf Outlet. While efforts are underway to reduce some of the impacts of this shipping channel, it is very unlikely to reduce the salinity within the lake by a significant amount and even if a salinity reduction is eventually accomplished, little if any of the remaining freshwater characteristics of the system subjected to daily tidal action will be alive. Construction of the Interstate 10 Highway system through the La Branche Wetlands at approximately the same time as the MRGO was connected to the lake via the Gulf Intracoastal Water Way and the Inter Harbor Canal, allowed increased water salinity to enter heretofore healthy freshwater ecosystems. WWM#1 04

Protection of the remaining freshwater marsh and swamp ecosystems of this portion of the state are critical from a human infrastructure standpoint. Prevention of Lake Pontchartrain from breaching into the fragile marshland will provide a buffer between the lake and I-10 and WWM#1 05

Wetlands and Wildlife Management Co. ♦ 246 Allan Ensminger Rd. ♦ DeRidder, LA 70634

WWM#1 04: Comment noted.

WWM#1 05: Comment noted.

Letter 79: Mr. Allen Ensminger, Wetlands and Wildlife Management Co. (WWM#1)

1-55, both critical evacuation routes for the Greater New Orleans area during tropical storm events.

Throughout the Subprovince Alternatives for the LCA Study freshwater reintroduction is a linchpin item; however; no direct mention is made regarding utilization of the authorized "Mississippi and Louisiana Estuarine Areas Freshwater Diversion to Lake Pontchartrain Basin and Mississippi Sound" project. I fully support the conclusions drawn from the Environmental Assessment of that study that a major freshwater diversion facility could be constructed within the Bonnet Carre Spillway without adverse impacts to Lake Pontchartrain and adjacent wetlands and would assist with reduction of saltwater intrusion into the remaining freshwater ecosystems of the Basin. Based upon information presented in the EA and the 1984 FEIS, this project would be an excellent high priority item for the Near-Term Ecosystem Restoration Plan. Features of this proposed project would blend well with the concept of dedicated dredge and fill efforts such as the first Coastal Wetland Planning Protection and Restoration Act project near the mouth of Bayou La Branche in 1994. Adjacent deteriorated freshwater marsh areas are available for this same application of restoration. A consistent supply of Mississippi River water in the western end of Lake Pontchartrain would reduce the annual loss of bald cypress/tupelo gum swamp and the invasion of salt tolerant marsh plants into the freshwater habitat. A large structure within the Bonnet Carre Spillway would be capable of providing direly needed freshwater to the Lake Borgne and Mississippi Sound complex without environmental impacts that would be associated with major freshwater diversions along lower reaches of the river in Plaquemines Parish. WWM#1 06

WWM#1 07 Various state and local shoreline protection projects have been installed along the southern shoreline of Lake Pontchartrain east of the mouth of Bayou La Branche and are accomplishing their goal; however; between the eastern end of the protection facilities and the Jefferson/St. Charles Parish line, Lake Pontchartrain continues to encroach into the fragile wetlands at an alarming rate! Continuing the same type of riprap shoreline protection along this section of the lake would allow the adjacent landowners an opportunity to manage their properties for fish and wildlife resources. Consideration must be given to a system of structural features to prevent the ongoing invasion of saltwater into the La Branche Wetlands.

Offshore breakwater facilities installed by the Corps of Engineers in the western end of the Lake as mitigation for the unavoidable impact of construction of the St. Charles Parish Hurricane Protection Levee should be converted into a shoreline protection facility as suggested by the North American Waterfowl Management Plan proposal. This is the only way fragile wetland within the Manchac areas can withstand the high-energy wave attack now that freshwater plant communities that once protected the shoreline have been eliminated. Use of a small suction dredge could deposit fill material back of the structure and restore a considerable acreage of freshwater marsh habitat. WWM#1 08

WWM#1 09 Throughout the process of development of the Coast 2050 Plan, landowners within the western portion of the Lake Pontchartrain Basin have participated in the Public Meetings and repeatedly ask for relief from saltwater intrusion and shoreline encroachment. Both of these adverse environmental conditions fit well within the stated goals of the Near-Term Plan of having projects that can be accomplished within a ten-year time frame.

WWM#1 06: The 1984 study referred to describes a proposed diversion site at the Bonnet Carre Spillway (Plan F) as the NED plan for establishing desired salinity regimes in the Lake Pontchartrain Basin. A reevaluation of the existing authorized project in Bonnet Carre Spillway was conducted during the LCA plan formulation process. The restoration feature consisted of a medium diversion with east and west branches into the LaBranch wetlands and Manchac land bridge. The PDT determined that this project feature was too complex to have feasibility level decision documents complete and construction begun within the next five to ten years of plan implementation. Please see the Plan Formulation discussion for further information on the description and elimination of the Bonnet Carre Spillway medium diversion project feature.

WWM#1 07: The LCA Near-Term Plan did not consider a system of structural features to prevent saltwater intrusion in the La Branche wetlands area. Rather, restoration features of the Final Array of Coast Wide Frameworks proposes a medium diversion at the Bonnet Carre Spillway with east and west branches into the La Branche wetlands and the Manchac land bridge was the most cost-effective alternative for this feature. For additional information please see General Response #1 regarding the proposed MRGO Restoration Feature.

WWM#1 08: Modifying the existing breakwaters at Manchac was not considered during the LCA Plan formulation process as these structures are currently accomplishing the purpose for which they were designed. Modification or additions to these structures may be considered in later phases of the LCA Study if such action would address a critical need.

Letter 79: Mr. Allen Ensminger, Wetlands and Wildlife Management Co. (WWM#1)

Staff of the CWPPRA Task Force has studied many worthwhile projects across the coastal marshes of the State over the life of this program and only a small percentage has been selected for implementation. Projects that were not selected for funding should be given high priority as candidates for the Near-Term list, otherwise the Public may view their past efforts as a waste of time and give up on future participation. WWM#1 10

I look forward to being involved with the development of the Near-Term Ecosystem Restoration Plan and will provided more detailed comments on the above-suggested projects if requested.

Sincerely yours

ABE

Allan B. Ensminger

ABE/me
c.c. Mr. W.A. Monteleone Jr., St. Charles Land Syndicate
Mr. Allen Bolotte, NRCS
Dr. Curtis Hopkins, Ducks Unlimited

WWM#1 09: As outlined in Section 3 of the LCA Main Report, the list of originally considered project features was subjected to a rigorous selection process to attain the final 15 projects that were selected for the LCA Plan. Plan formulation projects were identified based on their applicability to restoration approaches, ability to be implemented within five to ten years, associated uncertainties, and ability to meet critical needs criteria. Several projects within the Pontchartrain Basin were considered during plan formulation; however, due to the selection process outlined above, some were not carried through to the LCA Plan.

WWM#1 10: Public comments are noted and taken into consideration. However, a rigorous selection process was used to attain the final 15 projects selected for the LCA Plan. See response to WWM#1 09. For additional information, please see General Response #6 regarding the relationship of CWPPRA and LCA.

Letter 80: Mr. Allen Ensminger, Wetlands and Wildlife Management Co. (WWM#2)

Allan Ensminger
(337) 462-0762

August 21, 2004

Dr. William P. Klein, Jr.
CEMVN-PM-C
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Dr. Klein,

WWM#2 01

This letter will serve as an official request that my comments made during the Public Meeting in Cameron, La. on July 28, 2004 and my letter to you dated May 18, 2004 is entered into the records regarding the LCA Study and the Tentatively Selected Plan. I appreciate the efforts that staff of the New Orleans District, U.S. Army Corps of Engineers have put forth to develop a Near Term Plan for coastal restoration of the Louisiana wetlands. However, I feel that the TSP falls short of what the general public expected to be a course of action to address rapidly eroding coastal areas! In particular, throughout the development of the Coast 2050 process, the public objected to spending hard earned restoration dollars on more academic studies! Utilization of the Science & Technology Program will result in a select group of individual selecting demonstration projects that may or may not have application to actual restoration or protection of coastal wetlands.

WWM#2 02

The small diversions proposed in the TSP for the upper end of the Pontchartrain Basin would do little if anything to protect the La Branche Wetlands and the area within the Maurepas swamp where saltwater intrusion is observed. Unless a major diversion at the Bonnet Carre Spillway facility is implemented, there will continue to be loss of the freshwater swamps and fragile freshwater marsh in Subprovince 1. Even if a saltwater lock is eventually installed in the MRGO, wetland deterioration in the Basin has progressed to the point where continued loss will occur without freshwater benefits.

I appreciate the opportunity to comment on the TSP and hope that this plan can be adjusted to select a more meaningful list of Near Term Projects in line with what the public expects.

Sincerely yours,

Allan B. Ensminger

Allan B. Ensminger

ABE/me

Wetlands and Wildlife Management Co. ♦ 246 Allan Ensminger Rd. ♦ DeRidder, LA 70634

WWM#2 01: Comments noted. The foundation of a Science and Technology (S&T) Program is intended to assist project managers in ensuring that individual project features are coordinated to achieve the overall goals and objectives of the LCA Plan. Additionally, the S&T Program will ensure that restoration is carried out on the best available science is available for restoration. This includes answering relevant uncertainties to ensure that restoration efforts have the highest likelihood of success. The S&T Program will include a multi-agency membership including federal and state agencies, tribal governments, and local government representatives. This multi-agency voice will ensure that work carried out through the S&T Program will benefit the LCA Plan as a whole. Also, please see General Response #2 regarding the S&T Program.

WWM#2 02: The proposed small diversion at Hope Canal, Amite River Diversion Canal Influence by gapping banks, and small diversion at Convent/Blind River would increase the introduction of freshwater into the western Lake Pontchartrain Basin. In addition, the proposed Programmatic Authority to Initiate Studies for Modifications to Existing Water Control Structures and/or Operation Management Plans includes an opportunity for considering the modification of the Bonnet Carre Spillway as a long-term restoration feature.

Letter 81: Mr. John A. Whittle (JAW)

Statement of John A. Whittle to US Army Corps of Engineers Meeting

Beaumont, Texas July 29, 2004

My name is John Whittle, and I am a member of the Board of Directors of the National Audubon Society, nominated by the Audubon Chapters in the Southwest Region, which comprises Louisiana and Texas.

We are pleased that the Louisiana Coastal Area Ecosystem Restoration Study has been released. However, there has yet been little time to study it in detail, and these comments reflect my initial reactions. We may well have additional comments later.

Coastal Louisiana represents one of the most hydrologically manipulated regions in the world. The numerous man-made channels through the coastal marshes compound the problems caused by alternation of the historic patterns which distributed Mississippi River fresh water and sediments through much of the coastal plain west of the current course of the river. Other consequence of channeling the river water, sediments and nutrients out far into the Gulf into deep water include a lack of sediments feeding into the coastal current that flows to the west along the Louisiana and Upper Texas coasts, and the now famous and expanding dead zone in the Gulf where excess nutrients consume too much of the dissolved oxygen. The net result is that the Louisiana and Upper Texas Coasts are eroding at an alarming rate notwithstanding smaller perturbations caused by the rock jetties at the mouth of the Sabine River and at the Bolivar Roads entrance to Galveston Bay.

The coastal wetlands that are being lost are the winter home of probably 70 percent of the waterfowl that use the Central and Mississippi flyways while the delta system provides critical habitat for at least 17 federally endangered and threatened species, most of them shorebirds. The wetlands are the lifeblood of the Louisiana seafood industry which is second only to Alaska in the value of its landings. In addition to their ecological value, the wetlands provide a natural flood protection system to the extensive oil and gas production facilities, the Strategic Petroleum Reserve and the coastal communities from storms and hurricanes.

JAW 01

The commercial value of the Mississippi River as a transport system for bulky cargoes which are not particularly time sensitive is unquestioned. While returning the entire Mississippi River to its historic state is not practical, we believe it is practical to allow fresh water and sediment flows into the coastal systems such as the Atchafalaya. We support without significant reservation four of the five proposed "early-action" projects that can be initiated under existing Corps programmatic authority. These are the diversions or increased diversions of freshwater and sediment into Bayou LaFourche; through the Hope Canal to

JAW 01: Comment noted. The five proposed "early-action" projects are recommended for specific Congressional authorization conditional subject to Secretary of the Army review and approval of feasibility-level decision documents. They cannot be initiated under existing USACE Programmatic authority.

Letter 81: Mr. John A. Whittle (JAW)

JAW 01 (Continued)

the Maurepas Swamp, and at Myrtle Grove, and the barrier island project to protect the Caminada Headland.

JAW 02

The proposed restoration projects on the Mississippi River Gulf Outlet canal do not address the real problem. We urge the Corps to develop a plan which closes the canal permanently. We understand the canal is little used, and the damage done by salt water intrusion into wetlands east of the River up a channel that has eroded well beyond its original dimensions outweighs any benefit.

JAW 03

We support vigorous efforts to make maximum beneficial use of dredge material, especially where it can help introduce material to areas which historically received sediments by natural processes. However, we see it as a significant deficiency in the EIS that there is no explicit requirement that sediments in each location be chemically tested for possible contaminants before being applied to such beneficial uses.

JAW 04

We note the comment at the top of page 6-18 of the EIS referring to the possibility that significant problems might be posed to the coastal restoration objective by other Corps projects and agree that it is essential that all other projects be reviewed and, if necessary, modified so that they do not conflict with coastal restoration.

JAW 05

We see this plan and these projects as an important initial step to the preparation and implementation of a comprehensive long term restoration plan to reverse the loss of wetlands, which should, to the maximum extent practical, use, restore or replicate natural deltaic processes. The pilot projects will provide valuable information on the efficacy of the methods to be employed. However, in addition, to ensure that all coastal restoration activities are based on sound science, we urge that you develop a Science and Technology Program, reviewed and evaluated by an independent science board, to assess the benefits of different restoration methods and technologies.

We look forward to a comprehensive plan on a much larger scale in due course.

Thank you for the opportunity to comment on this plan.

JAW 02: Please see General Response #1 regarding the proposed MRGO Restoration Feature.

JAW 03: The Clean Water Act 404 (b)(1) Guidelines (40 CFR 230) are the environmental criteria for evaluating the proposed discharges of dredged or fill material into waters of the United States. Compliance with these guidelines is the controlling factor used by the USACE to determine the environmental acceptability of disposal alternatives. The USACE must demonstrate through completion of a 404 (b)(1) evaluation that any proposed discharge of dredged material is in compliance with the Guidelines. Section 4 of the PEIS contains language referencing the *Evaluation of dredged material proposed for discharge in waters of the U.S. – Testing Manual* (EPA/USACE, 1998) testing protocols and the USACE's intention to employ these and/or similar guidelines for evaluating the proposed discharges of dredged or fill material into waters of the US. Additional language will be incorporated into Section 4 of the PEIS to further explain the USACE processes for the above.

JAW 04: Comment noted. The "Consistency of the LCA Plan with other efforts" section of the FPEIS describes the goals for ensuring consistency between development, coastal protection and restoration.

Letter 81: Mr. John A. Whittle (JAW)

JAW 05: As outlined in Section 4 the LCA Plan calls for the formation of a Science and Technology (S&T) Program supported by three entities: S&T Office, Science Board, and Science Coordination Team. The Science Board would be responsible for independent assessment of the S&T Program and would produce periodic reports to the Program Manager and Director of the S&T Program. Additional information on the Science and Technology Program can be found in Appendix A.

Letter 82: Ms. Carolyn Shaddock Woosley (CSW)

Carolyn S. Woosley, CFP[R]
628 Cleveland Street
Lake Charles, Louisiana 70601-5365

337.436.6275
337.494.0217 [fax]
cswoosley@yahoo.com

August 7, 2004

Mr. Tim Axtman, Project Study Manager
U.S. Army Corps of Engineers, CEMVN-PM-C
PO Box 60267
New Orleans, LA 70160-0267

Dear Mr. Axtman:

The following are my "official comments" which I wish submitted into the record as a result of the July 28, 2004 Region 4 public meeting of the LCA Ecosystem Restoration Study Tentatively Selected Plan [TSP]. This meeting was held in Cameron, Louisiana.

CSW 01

First, as a member of the Board of Directors of the Coalition to Restore Coastal Louisiana, I strongly state that the LCA must have the back-bone of a comprehensive, over-arching plan. Even if its projects are broken into ten-year fragments and relatively small funding segments, what informs the LCA planning must be a coordinated comprehensive plan for preserving and restoring Louisiana's disappearing coast and interior wetlands.

CSW 02

The TSP is based on do-able projects for the state areas identified as having the most critical needs. Are you satisfied that the needs longterm, both of Region 4 and of the nation, are being addressed? We in Region 4 are very supportive of the efforts to address the needs of Regions 1 – 3. The losses in those regions appear to be greater, and the pace of loss more rapid, than those in the Chenier Plain. However, I suggest that you also consider the economic importance of Region 4 to the state and nation and the importance of protection as Region 4's experiences infrastructure growthin the foreseeable future. Such anticipated and existing infrastructure will be vulnerable to coastal and inland wetlands erosion. Region 4 has within it two of the nation's four Strategic Petroleum Reserves, the most-used lock [Black Bayou] on the GIWW, if not in the nation, a growing liquefied natural gas [LNG] complex of plants, as well as two of the nation's top 12 ports – Beaumont and Lake Charles, if you consider east Texas as part of the chenier plain ecosystem. Under USACE management those two port systems will soon deepen and widen their respective ship channels – the Sabine and the Calcasieu. Have salt water intrusion impacts of this dredging been fully determined? The deleterious experiences of St. Bernard Parish with the MRGO come to mind. In addition, as Texas's need for fresh drinking water escalates, and as Texas reconsiders its plans to secure sufficient sources of drinking water for the Dallas-Fort Worth, Houston and San Antonio-Austin metropolitan areas, fresh water from the Sabine River and Toledo Bend Reservoir may be tapped, given interstate arrangements and water rights laws of the State of Louisiana. If Texas were to tap such resources in sufficient supply, the balance of fresh and saline waters to the western portion of Region 4 could be altered to its detriment. Please consider this possible scenario in your future planning efforts.

CSW 03

I am concerned that very early in the LCA hearings process one large project category of Region 4, that is, the possibility of a lock at the mouth of the Calcasieu Ship Channel, was dropped. My questions are: why, and at whose request and was the public included in this decision? Admittedly, Region 4 does not have large projects underway via CWPPRA. Lock installation, albeit expensive and probably hotly contested, is a large project that could

CSW 01: Please see General Response #3 regarding the LCA Study Area.

CSW 02: Regarding the needs of Region 4, please see General Response #11 regarding LCA restoration efforts in Subprovince 4. Economic evaluation of potential impacts resulting from continued loss was conducted on a coastwide scale. This was done to illustrate the importance of the entire Louisiana coastal area to the Nation. Economic evaluations at the basin or project specific scale will be accomplished in future studies.

At this time, no determination has been made whether or not the Sabine and Calcasieu ship channels will be deepened. As such, these evaluations did not consider potential impacts resulting from this possible future action.

An agreement exists between Texas and Louisiana regarding water use in the Sabine River and Toledo Bend Reservoir. Potential impacts would be evaluated prior to any action.

CSW 03: Consideration of the Calcasieu Pass Lock restoration feature was initially contemplated as a keystone restoration feature from the Coast 2050 Plan and brought forward as part of the Subprovince 4 Alternative Maintain 1 (large scale salinity control) features. This feature, along with all comprehensive restoration features, was provided for public review and comment during the initial scoping meetings in April and May of 2002, as well as at subsequent public and stakeholder meetings. However, the Calcasieu Pass Lock did not pass the cost-effectiveness analysis performed during the framework development process, which is described in Section 3 of the Main Report.

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CSW 03 (Continued)

address the significant problem of Region 4: saltwater intrusion. The ship channels, both Calcasieu and Sabine, must, because of their current depths and their reach inland, be considered culprits.

CSW 04

I applaud LCA on the $100 million allocation for beneficial use of dredged materials. I understand that the Port of Lake Charles has such materials at the ready for disposal, and there are projects in the region with a proven track record of using these materials. It is my understanding that Region 4 can make good headway expanding its proven projects using the dredged materials, given a steady source of funding [allegedly lacking in past years] and a steady and cost-effective delivery of these materials [challenges going forward].

CSW 05

I request that the USACE have regularly scheduled update meetings in Region 4 on existing LCA projects, whether they be demonstration projects or studies or even CWPPRA projects that could point the way to future LCA projects.

CSW 06

I urge the Galveston, Texas office of the USACE to become involved in the needs of Region 4 and of the impact of their navigation-sponsored and managed projects on the health of the chenier plain.

CSW 07

I urge the USACE to review closely the environmental impacts of dredging, both of the Sabine Ship Channel and the anticipated dredging of the Calcasieu Ship Channel. One wonders how a small portion of the ecosystem sandwiched between two significant ship channels, will survive. Again, this calls to mind St. Bernard Parish's past experiences with the MRGO.

CSW 08

Region 4 has lost over twenty percent [20%] of its wetlands since 1932. Speaking for the residents of Region 4, I will say that we expect the USACE and the LCA Plan, as it evolves, to look with care and concern at the needs of the chenier plain. Meanwhile, I urge the agencies managing CWPPRA to send as many good CWPPRA projects to Region 4 as are feasible. I understand that our Region has received perhaps 50% of all CWPPRA projects since inception. I trust that this has been a good investment on CWPPRA's part.

Finally, I appreciate the great amount of work that LCA has demanded of your staff and you. Thank you for giving of your time and expertise to this very demanding project.

Respectfully submitted,

Carolyn Shaddock Woosley
Board of Directors, Coalition to Restore Coastal Louisiana
Team Green of SWLA

cc

CSW 04: Comment noted.

CSW 05: Section 5 of the LCA Plan describes future public involvement. As the LCA Plan transitions from plan formulation to plan implementation, there would also be opportunities for public participation and input. For each of the LCA Plan projects, the requisite decision documents, NEPA documents, and accompanying public participation process would be completed. During this time, the public would have the opportunity to comment on the scope of issues, resources, impacts, and alternatives to be addressed in the DEIS. During periods when officially public or scoping meetings are not being held, the USACE, in coordination with the state of Louisiana, would allow communication with the community through web site interaction, speaking engagements, workshops, news releases, timelines, frequently asked questions, fact sheets, and talking points. To that end, a Strategic Communications Plan would be established that clearly defines a proactive, consistent, and cohesive procedure for informing the public of the LCA Study process and the development of the LCA Plan.

CSW 06: The New Orleans District and the Galveston District continue to coordinate regarding the potential impacts of studies and projects both within and between their respective district boundaries. Coordination has been established and will continue between the Senior Project Manager and Branch Chief in Louisiana and Senior Project Managers and the Branch Chief in Galveston.

CSW 07: The impacts of continued maintenance of the Calcasieu River and Pass, LA, project were addressed in the FEIS, "Calcasieu River and Pass (including Salt Water Barrier); Coon Island; Devil's Elbow, Calcasieu River Basin, Louisiana (Continued Maintenance and Operation)", 11 March 1977.

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CSW 07 (Continued): Prior to each maintenance event, the MVN prepares a Federal consistency determination for review by the LA DNR's Coastal Management Division and updates the 404(b)(1) evaluation and state water quality certification if necessary.

CSW 08: Comment noted. Please also see General Response #11 regarding LCA restoration efforts in Subprovince 4.

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3.2 GENERAL RESPONSES

Several issues were commented on by many commentors. Rather than repetitive responses on these issues, the following general responses were developed to address all aspects of comments on each issue.

3.2.1 General Response #1 Regarding the Proposed MRGO Restoration Feature

***Issue**:* *A number of agency and public comments expressed concern regarding the proposed plan element to stabilize the navigation channel of the Mississippi River-Gulf Outlet to prevent breaching of the southern shoreline of Lake Borgne. 1) There is concern that the projected timing and large capital investment required for placement of extensive rock breakwaters along the canal would preclude any subsequent restoration activities that would require closure of the canal to navigation. 2) Comments indicated that there is a substantial possibility that closure and reclamation of the canal would provide greater hydrologic and ecological benefits. In addition, 3) a number of comments expressed concerns about the hydrologic and ecological impacts of breakwater placement, as these structures would be significantly different than the geomorphic features that were present prior to construction of the canal.*

Response: The proposed near-term restoration feature for MRGO included in the LCA Plan is a multi-phased process for addressing environmental restoration of the MRGO area. The near-term restoration feature (first phase) proposed in the draft LCA Study Report and FPEIS involves the construction of protective breakwaters along strategic segments of the north bank of the MRGO and the southern shoreline of Lake Borgne. These segments are in danger of breaching, and if not quickly addressed, threaten the integrity of the Lake Borgne ecosystem and future efforts to restore other features in the area. The proposed restoration feature is required to address the most critical needs for the MRGO restoration plan. Stabilization of MRGO is a critical requirement because allowing the canal to breach the southern shoreline of Lake Borgne would have significant impacts on the hydrology and ecology of the area, and could have a large impact on the salinity gradient in the area. The resulting increase in salt-water tidal flow into intermediate, brackish and fresh water areas would cause changes in hydrologic conditions, habitat loss, and increased erosion rates, some of which may be irreversible by future restoration actions. In addition, these changes would have negative impacts on property and human activities in the area, including increased vulnerability to flooding in occupied areas, loss of economic opportunities related to shellfish and finfish

harvests, and impacts on navigation and related commercial and recreational activity in the area.

The proposed installation of rocks to constrict the breaches between MRGO and Lake Borgne, maintain the shoreline of Lake Borgne, and stabilize the north bank of the MRGO is fully consistent with the near-term strategies of the Coast 2050 Plan, a plan developed on a consensus basis involving a large body of the public, stakeholders, and parish and municipal representatives. A rock breakwater design was chosen in the LCA Study based on the considerable working knowledge available on the design, placement and maintenance of these types of coastal protection structures. While other materials or methods may potentially be used to augment and stabilize the channel banks, considerable effort would be required to evaluate the technical feasibility and implementation methods for alternatives to rock breakwaters. Because of the reliability of these construction methods and materials, the proposed feature is considered the best available option that can be implemented on a schedule that would avoid the potentially irreversible impacts related to breaching of the channel – Lake Borgne shorelines. Riprap bank stabilization structures have a design life of 50 years, but may be useful for longer periods if properly maintained.

While there are considerable capital costs associated with implementation of this feature, its implementation does not preclude later actions that may include modification or closure and reclamation of the canal. Other restoration features of the multi-phased MRGO restoration will be accomplished under the "modifications to existing structures" (a navigation channel is considered a structure under civil works) programmatic component of the LCA Plan.

The resolution of the future use of the MRGO is critical in determining the ecosystem restoration measures that can be developed for this part of the coast. Currently, a separate evaluation of the economic and ecologic aspects of the MRGO project is being completed. The primary goal of this separate study is to determine the viability of the continued use of MRGO for deep-draft navigation. The results of this study will provide insight into restoration options for MRGO to be developed under the LCA Program. Additional restoration features beyond this first phase critical-needs action will be determined using the "modifications to existing structures" element of the LCA Plan for restoration of the hydrologic and ecologic functioning of the area. The future action resulting in closure of the MRGO to deep-draft and other navigation would also require alternative navigation routes and port facility configurations in order to meet the transportation needs that are currently served by the MRGO. The second phase of the MRGO (conducted under the "modifications to existing structures" element of the LCA Plan) would

take into consideration the navigation authority, but could recommend future ecosystem restoration activities that include closure or modification of the MRGO channel or channel relocations necessary to meet restoration goals.

3.2.2 General Response #2 Regarding the Science & Technology Program

Issue: *Numerous comments expressed concerns that the S&T program of the LCA Plan should be administered by an independent board or governing body that is not comprised of or directed by USACE staff. Many of these comments also expressed concerns that the S&T program would be used to provide funding for scientific research that would not generate practical applications for coastal restoration.*

Response: The proposed structure of the Science and Technology Office, including the roles of the Science Board, Science Coordination Team and Ad Hoc Peer Review Committees is described in Section 4.2.7 of the plan. The proposed management structure provides a balance between accountability to the cost-share partners for funding and coordination of S&T efforts with the need for objective and independent scientific research to establish that is directly applicable to the restoration efforts of the Louisiana coastal area. The USACE is directly responsible for the administration of appropriated funds for the program, and must maintain direct authority over program resources, including funding of USACE staff, contracts issued to firms to provide services, and grants awarded to research institutions. For control of the S&T program to be placed outside the administrative control of the USACE, Congress would authorize the establishment and funding of an independent organization.

The Science Board, the Science Coordination Team and Ad Hoc Peer Review committees will all have members with technical expertise needed to determine research priorities and to evaluate proposals and coordinate research with applications to restoration activities. Other government agencies, the State of Louisiana, academic researchers, NGOs and private interests will be represented in the S&T Office. This management structure provides for appropriate accountability by the cost-share partners for the program, while ensuring that the scientific investigations performed by the program are directly applicable to the Louisiana coastal area and are based on the best available scientific information.

The current recommendation for the composition of the S&T Office includes provisions for independent review in all levels of development of the plan including S&T activities. This review would be conducted by National Academy of Science-level academics who are independent of the LCA Program structure. It

is also recommended that the S&T Office will be housed in an appropriate academic environment outside of either the state or federal government agencies. The specific location has not yet been decided.

While it is true that the S&T Office will be charged with conducting scientific investigations and developing demonstration projects to answer key uncertainties, these activities will be applicable to achieving coastal restoration. Answering scientific and technical uncertainties is a critical component of Adaptive Management (AM). The AM process will enable the S&T Office to incorporate information from all levels of the LCA Plan into the decision-making process, and use ecosystem feedback to improve plan performance. In order for this process to work, a long-term view of restoration is required that is dependent on good monitoring and answering ecological and technical uncertainties through the use of demonstration projects and scientific studies. The LCA Plan may be adjusted in accordance with AM processes and may require shifts in priorities and strategies for implementation of the LCA Plan. Periodic reporting throughout the chain of command, including Congress, has also been incorporated in the AM process to assess plan performance and facilitate the potential to change aspects of the Plan based on ecosystem feedback.

3.2.3 General Response #3 LCA Study Area

Issue: *Comments noted that the restoration effort for the LCA Program may have impacts beyond the four subprovinces described in the LCA Plan, and that hydrologic and ecologic processes occurring outside these areas may also affect the restoration activities. It has been suggested that the LCA Plan address other areas that may interact with the Louisiana coastal area, including the Bay Saint Louis area of Mississippi, Sabine Pass and the easternmost coastal area of Texas, the entire Atchafalaya River Basin and upstream portions of the Mississippi River Basin that may interact with hydrologic and ecologic processes in the Deltaic and Chenier Plains.*

Response: The critical needs projects are located within Subprovinces 1, 2 and 3 of the Louisiana coastal area; however, additional programmatic activities, such as the Science and Technology program, demonstration projects and Beneficial Use program may be implemented in any part of the Louisiana coastal area where there is a potential to develop restoration processes that can be used in Long-Term and Large-Scale actions beyond the scope of the current plan. For critical needs projects and for ongoing programmatic activities, studies needed to support these actions may include data collection and study elements located in areas outside the Louisiana coastal area subprovinces, if needed. For example, if a study is proposed

for a restoration method that may be applicable to the Chandeleur Islands, data collection and study efforts could extend to coastal Mississippi if there is a need to include that area based on the technical requirements of the project. In addition, development of project-specific plans and environmental impact analyses for the Near-Term Critical Needs projects may include geographic areas outside the subprovince where the project is located if ecological and hydrologic processes at other areas could affect or be impacted by a project.

Implementation of the LCA Plan is envisioned to be managed in a collaborative way. The Program Manager is recommended to be the Commander of the Mississippi River Division who also acts as the President of the Mississippi River Commission in cooperation with the State of Louisiana. By having Program Management vested in this office coordination of activities throughout the Mississippi Valley is insured. In addition it is envisioned that the Program Management office will coordinate with other resource agencies so that projects and activities across the coast can be leveraged and coordinated to insure the best and most effect restoration sets both in the Louisiana coastal area and adjacent states.

3.2.4 General Response #4 Coordination Roles for Agencies and Local Governments in the LCA Study

Issue: *Comments stated that the plan does not acknowledge or may conflict with ongoing restoration and coastal protection efforts at the local level, on a parish and multi-jurisdictional scope. Also, some comments requested a formal role for local governments and agencies in project development and implementation, including formal instruments such as MOA/MOU, and claim an interest in the process as representatives of constituencies that are providing funding through the state's share of project budgets. USACE guidance is needed on these requests.*

Response: Consistency and coordination between the LCA Program and ongoing restoration and protection efforts being undertaken at various levels will be coordinated with the Louisiana Wetlands and Restoration Authority and the Louisiana Governor's Advisory Commission on Coastal Restoration and Conservation. The knowledge and expertise of these agencies regarding ongoing projects in the Louisiana coastal area will be used to coordinate projects and eliminate conflicts, as described in Section 4.3.2 of the Main Report. The public participation plan will include specific mechanisms to coordinate with local government and agencies.

3.2.5 General Response #5 10-Year Planning Horizon

Issue: *Some comments suggest that the 10-year planning horizon is not sufficient for the Louisiana coastal area, given the scope of the problem, the resource requirements for the plan elements, and the need to develop and implement a comprehensive approach to address erosion and wetland loss in the Deltaic and Chenier Plains of coastal Louisiana.*

Response: It has been recognized that Louisiana's coastal land loss problem needed to be addressed on a system-wide basis, rather than attempting to address small issues one at a time. Therefore, the LCA Plan seeks to address coastal land loss in a holistic manner. Additionally, it is recognized that there are some gaps in scientific knowledge that are crucial for understanding how the system might react to specific restoration activities. During the planning process, budgetary guidance stated that in light of the urgent need for action and the recognition of many remaining uncertainties, planning and implementation efforts should focus on near-term critical needs that could be effectively addressed with current knowledge of science and engineering practices. The decision was made, therefore, to identify near-term critical needs, and proven restoration practices, and to focus on restoration features that could begin construction within the next five to ten years. The guidance also stated that the LCA Plan implementation should continue to improve science and technology and develop large-scale and long-term restoration plans and features for coastal restoration.

With this guidance the PDT selected near-term features that addressed critical needs that are believed to have a high degree of understanding and that could be implemented within ten years. In order to devise a program that met the intent of the budgetary guidance the LCA Plan also contains a Science and Technology Program. The S&T Program supports restoration efforts by reducing relevant scientific and technical uncertainties. As uncertainties are resolved and as ecosystem responses are monitored and assessed, the S&T Program provides the best available science to support future LCA Plan revisions. These Plan revisions would be forwarded to Congress for possible inclusion in an amended restoration plan for coastal restoration. In addition to the near-term critical needs and S&T Program, the LCA Plan includes a component to investigate potential modification to existing structures to enhance or improve the management of existing resources for restoration purposes.

The LCA Plan is intended to address critical issues that, without near-term attention, have a high potential of creating a much larger problem. The components making up the Plan have the potential to be combined with other

features or built upon to address a larger issue within the system. This strategy allows the USACE to address serious issues in the near-term (via the 15 near-term critical restoration features), while still investigating unresolved issues within the system (via the Science and Technology Program) and the Large-Scale and Long-Term Restoration Concepts will based on the best available science, develop restoration efforts that may extend beyond the 10-year planning horizon.

3.2.6 General Response #6 Relationship between CWPPRA and the LCA Plan

Issue: *Comments note that there are CWPPRA projects with nearly complete engineering and design that should be included in Louisiana coastal area. Other comments question the relationship of LCA Plan and CWPPRA for overall planning and funding.*

Response: Working relationships that have been established through the CWPPRA and continued through the LCA Study effort will continued into the implementation of the LCA Plan. The LCA Plan specifically calls for the establishment of regional and national-level inter-agency coordination groups. The recommended make-up of these groups expands on the current level of involvement to include agencies that have not historically been involved in environmental restoration or management but are affected by, or can affect the implementation of restoration solutions. As the lead agency in this restoration effort, the USACE will continue to foster interagency involvement and cooperation at both the federal and state levels.

The continued execution of the CWPPRA program in conjunction with the proposed LCA Program is critical to successful coastal restoration. It has long been recognized by the CWPPRA Task Force that complete and effective restoration of Louisiana's coastal wetlands would require a larger programmatic effort than provided for through CWPPRA alone. The CWPPRA Task Force has effectively met the need to address very broad-scale and dynamic wetland loss needs in an abbreviated time-scale while continuing to investigate the larger and more comprehensive restoration needs of the coast. The Coast 2050 planning effort, which provided the foundation for the initiation of the LCA Study effort, is a key example. However, the broad and immediate restoration needs continue to be present in the dynamic coastal Louisiana ecosystem and the CWPPRA program continues to represent the best mechanism to address these needs.

In coordinating the efforts of the proposed LCA Plan and existing CWPPRA Programs, some thought was given to the magnitude, readiness, and criticalness of the features considered. An attempt was made to focus the LCA Plan towards

those features or logical groups of feature that the broadest scale systemic needs for coastal restoration. As noted above some of these features or needs have received, or are currently receiving, attention under the CWPPRA program. In considering these decisions had to be made as to whether, 1) the feature fit the scope of the LCA Program, and 2) what is the most effective means of achieving ultimate implementation. In some cases features were deemed to be of a scale more appropriate to the CWPPRA program. For those features being considered under CWPPRA that were considered in the LCA Study some did not appear in those coast wide frameworks identified as being coast effective. Others simply did not meet Sorting Criteria or sufficiently meet the Critical Need Criteria. Finally, some features developed through CWPPRA met the necessary near-term criteria but were determined to be more effectively moved to construction by allowing them to remain in the CWPPRA program. In the latter two cases an effort was made to indicate in the LCA Plan that those features with existing CWPPRA analyses, considered for the LCA Plan, are desirable components for a comprehensive coastal restoration effort.

3.2.7 General Response #7 Relationship between Coast 2050 and the LCA Plan

Issue: *Comments questioned the relationship of the LCA Program to the Coast 2050 Plan completed in December 1998.*

Response: The Coast 2050 planning effort provided a map of the desired Louisiana coastal landscape in 2050. However, the plan did not reconcile the relative extent or effects of the presented strategies. In initiating the LCA Study effort the planning team attempted identify those strategies in each region that utilized common approaches for restoration. Those commonalities then identified the "core" strategies for each region. These core strategies and the entire list of strategies then provided a basis for developing the "tool box" of specific restoration features. Finally, the core strategies provided the basis for the restoration approaches, which when combined with the basic planning scales for restoration, allowed the logical combining of restoration features to create the various subprovince frameworks. These subprovince frameworks developed from the strategy based restoration approaches became the fundamental elements for modeling the effectiveness of large-scale restoration and producing and identifying complete and effective coast wide restoration frameworks. The LCA Plan is the distilled output of that effort, which proposes only the most critically needed features of those coast wide frameworks capable of being brought to construction in the next ten years.

3.2.8 General Response #8 Project Implementation Protocols

Issue: *A number of comments noted that the rate of land loss has been very rapid, and that changes in the environment endanger residents, economic activities and ecological functions. These comments request immediate action rather than additional studies of problems in the Louisiana coastal area.*

Response: The Planning Guidance Memorandum signed by President Reagan in 1984 requires that Federal agencies responsible for implementation of water resource projects follow a specific and deliberate process of evaluation to insure that public investments of funds are protected. These procedures are not amendable except by specific Congressional action. The LCA Plan provides a general identification of projects to be completed, along with an overall assessment of expected impacts, but the detailed project-specific engineering, design and impact analyses must be completed for each individual project in the plan in order to meet the requirements of the Principals & Guidelines. The Federal policy and guidance for the planning and justification for water resources projects starts with a detailed definition of the problem to be addressed and the desired results to be achieved. Once the problem has been defined, several different approaches to the project are developed and evaluated. This study effort and programmatic EIS will serve as the starting point for final decision documents. The examination of alternatives will begin from those already identified in this report. The alternatives will be specifically compared for their effectiveness, efficiency, completeness, and acceptability. This effort included preliminary engineering and design, and benefit analyses. The final decision documents will provide detailed design and benefit analyses. This detailed technical evaluation of the problem and development of alternatives will also be used to evaluate the environmental impacts of alternatives, as required by the National Environmental Policy Act (NEPA), and produce documentation in a final Environmental Impact Statement (EIS). Public participation, including scoping, project review and comment opportunities will also be incorporated into each project to ensure appropriate decision-making and to facilitate implementation. Any permits and other regulatory approvals required are obtained, and project construction is then completed. The final decision documents will then be presented to the Secretary of the Army for construction approval if they are conditionally authorized features. If the feature has been proposed for future congressional authorization, the Secretary of the Army will forward the documents to Congress for their approval and authorization in a WRDA.

The process of developing and approving decision documents for each project ensures that each action undertaken by USACE works as planned, is reliable, and doesn't cause undesirable impacts (either to the environment or to safety and

property). Because restoration features are engineered structures and/or operations that interact with complex environmental processes, monitoring and modeling activities are used to refine project designs and verify their performance.

3.2.9 General Response #9 Sediment Transport via Pipeline

Issue: *Some comments noted that sediment transport by pipeline is an available restoration technique that should be included in development of restoration features, and should not be categorized as an unproven technology that requires more research and development before implementation.*

Response: The 79 features evaluated for development of the LCA Plan were selected based on existing programs such as CWPPRA and the technical experience of the plan developers. These potential restoration actions included 9 features based on pipeline transport of sediment to restore deltaic ecosystem functions and wetland development. These features included sediment delivery via pipeline at these locations:

- La Branche wetlands (Subprovince 1)
- American/California Bays (Subprovince 1)
- Central wetlands (Subprovince 1)
- La Branche wetlands(Subprovince 1)
- Fort St. Philip (Subprovince 1)
- Golden Triangle (Subprovince 1)
- Quarantine Bay (Subprovince 1)
- Bastian Bay/Buras (Subprovince 2)
- Empire (Subprovince 2)
- Main Pass (Head of Passes) (Subprovince 2)

These features did not meet the requirements of Sorting Criterion #2: features with sufficient science and technology and engineering understanding of processes. A significant uncertainty related to the large-scale excavation of sediments for wetland creation, particularly related but not limited to the Mississippi River, is the potential limitation of available material. This limitation relates to, not only the volume of material available, but the number of site from which material could reasonable be removed, the rate at which the available material may be excavated, and the rate at which the material would be replenished. The current estimate for sediment requires for the delivery features listed above is approximately 900,000,000 cubic yards. To put this in perspective, 3D model analysis of a "Sediment Trap" located in a highly effective site immediately above the Head of Passes of the Mississippi River indicates that on average approximately 6,000,000 cubic yards of sediment would be captured, or replenished, each year. The

potential limitation may also be compounded by the fact that upstream excavation may impact the replenishment of downstream borrow sites. In view of these potential limitations the large-scale use of river sediments will need to be a programmatic and long-term effort. The identification of most critical use of the available sediment may also need to be considered since commitment of these resources at one location has the potential to impact the availability for, or timing of, use at another location.

These features also have significant uncertainties regarding the engineering processes used in the restoration feature construction and operation, and/or in the hydrologic and ecological changes that would be produced by the restoration features. Pipelines have been used to transport sediment generated by maintenance dredging; however, technical information from these operations do not address methods required for effective sediment placement for wetland/marsh creation. Additional research and process development will be needed in these areas before the pipeline projects listed above can be incorporated into restoration efforts for the Louisiana coastal area.

Demonstration projects for pipeline transfer of sediments may be developed and implemented under the S&T Program, if pipeline demonstration projects can be identified that can provide adequate engineering and environmental information needed to initiate the engineering and design of these types of features. The Medium Diversion at Myrtle Grove with Dedicated Dredging and Barataria and Terrebonne Barrier-shoreline Restoration features both involve some wetland creation with dredged material. These features and the combinations of restoration types they provide will additional technical insight to efficient use of dredged material.

3.2.10 General Response #10 Proposed LCA Funding

Issue: *Comments received from the public, local governments, and interested organizations indicated concern that only a limited amount of funding was being requested for this effort, considering the size of the task. Concern was also expressed that features would only be implemented based on the availability of funds.*

Response: In regards to the availability of funds, availability of federal funding is subject to decisions made by Congress in the appropriations process for the federal budget. Annual appropriations support effective program management, and responses to changing priorities and needs, based on Congressional Authority. With the initial ten-year increment consisting of 15 near-term critical projects; programs for

Science and Technology, Demonstration project, Beneficial Use of Dredged Material, and Investigations of Modification of Existing Structures; and 6 Large-scale and Long-range Restoration Concepts, the nearly $2 billion budget is the appropriate level of funding for these efforts. When compared to other large-scale Federal restoration programs, this remains a significant amount relative to commitment of appropriations. With the probable level of combined annual funding available from the Federal and state cost share sponsors estimated to be approximately $200 million this plan represents the reasonable level of restoration that could be executed in a 10-year timeframe. The approach for expediting the process, through conditional authorization, for these components of the LCA Plan and retaining the standard authorization process for other components allows for the appropriation of funding for critical needs but still maintains the Federal system for "checks and balances." The $2 billion budget is much more manageable under this approach than if the entire restoration effort had been funded as a single authorization, and is adequate for implementation and management of the LCA Plan.

3.2.11 General Response #11 LCA Plan Restoration Efforts in Subprovince 4

Issue: *Members of the public, local government officials and interest groups expressed concern that there are not any Near-Term Critical Restoration Features proposed for Subprovince 4. These comments noted that significant shoreline erosion and wetlands losses are occurring in this portion of the Louisiana coastal area.*

Response: The Near-Term Critical Restoration Features that have been included in the LCA Plan were selected based on the plan formulation process that included development of alternative frameworks with compatible plan elements and the screening procedures that considered the Sorting and Critical Needs Criteria. The selection process did not include requirements that the plan elements address a specified geographic distribution, but administrative guidance for the FY05 budget required consideration of a near-term plan that addresses the areas of greatest need. The absence of Near-Term Critical Restoration Features for Subprovince 4 reflects the geographic distribution of currently identified critical needs in the Louisiana coastal area. The alternative development and selection process included specific restoration features in Subprovince 4, but these features did not score as highly to qualify as Near-Term Critical Restoration Features as those selected for inclusion in the LCA Plan. The long-term needs of Region 4 include more complex issues accompanied by gaps in scientific understanding. These issues will be addressed throughout Plan implementation (the first 10 years) by using demonstration projects and adaptive management to design restoration features that are based on

the best available science and are more likely to address issues in Subprovince 4 in the long-term. This demonstration project will help develop effective ways to protect this public resource in an area recognized as having some of the highest erosion along the coast.

In addition to the Beneficial Use program, other elements of the LCA Plan may provide the basis for implementing additional restoration features throughout the Louisiana coastal area, including Subprovince 4. The LCA Plan includes a program for investigations of existing structures. The intent is to begin investigations of existing structures (which includes navigation channels) for the potential for modification of these structures or their operation for additional contribution to ecosystem restoration. Finally, Chenier Plain Freshwater and Sediment Management and Allocation Reassessment Study will evaluate benefits, costs, and optimal execution of water and sediment resource management actions that could be undertaken within Subprovince 4. The inclusion of additional features in the LCA Plan will be based on the feasibility studies that are conducted for the Large-Scale and Long-Term concepts. The identification of effective and efficient management for available water and sediment resources through these studies would facilitate the approval and implementation of management actions. If the feasibility-level studies indicate that the costs and benefits are favorable and that technical and scientific uncertainties can be resolved, additional features will be amended to the LCA Plan.

It should also be noted that the LCA Plan does include proposals for programmatic authorizations that may produce specific actions in Subprovince 4 during their implementation. For example, the programmatic authorization request for beneficial use dredged materials may result in development and implementation of beneficial use actions in each of the subprovinces, because ongoing dredging activities will produce material that can be used in this program. Some comments specifically addressed the absence of beneficial use of dredged material from the Calcasieu Ship Channel as an element in the LCA Plan. The plan text has been revised to indicate that the proposed Beneficial Use of Dredged Materials program will be implemented throughout the Louisiana coastal area, based on the availability of dredged material, and the feasibility and potential benefit of individual beneficial use projects.

3.2.12 General Response #12 Hazardous Substances in Beneficial Use Materials

Issue: *Some comments expressed a concern regarding the potential environmental impacts related to the Beneficial Use program for dredged materials. Widespread*

industrial activity and transportation of hazardous materials within the Louisiana coastal area may have resulted in significant sediment contamination at numerous locations, including waterways that are maintained by dredging operations. Industrial discharges, spills, and management and disposal of wastes related to energy exploration and production were cited as potential contaminant sources that may have impacted sediment quality.

Response: As part of the assessment of potential impacts to water quality related to placement of dredged materials, the USACE has obtained input from EPA and the U.S. Geological Survey on expected water quality impacts associated with dredging operations and discharge of dredged material. This review provided an overall assessment of the expected effects of dredging on water quality for typical beneficial use operations, and these reviews have not identified any unacceptable water quality impacts expected from the Beneficial Use program. Any placement of dredged materials by the Beneficial Use program must comply with existing laws and regulations that apply to discharges of dredged materials to waters of the U.S. or to the marine environment. If dredged material and sediments beneath navigable waters are within the boundaries of a site designated by the EPA or the state for a response action under CERCLA, or if they are part of a National Priority List site under CERCLA, they will qualify as HTRW and will be treated accordingly. However, dredged material and sediments beneath navigable waters that do no qualify as HTRW, as defined in the preceding, will be evaluated for suitability for placement in waters of the U.S. in accordance with 404(b)(1) guidelines as mandated by Section 404 of the Clean Water Act, the water quality certification requirements of Section 401 of the Clean Water Act, Section 103 of the Marine Protection, Research and Sanctuaries Act, and the operating requirements of Section 10 of the Rivers and Harbors Act.

The Clean Water Act 404 (b)(1) Guidelines (40 CFR 230) are the environmental criteria for evaluating the proposed discharges of dredged or fill material into waters of the United States. Compliance with these guidelines is the controlling factor used by the USACE to determine the environmental acceptability of disposal alternatives. The USACE must demonstrate through completion of a 404 (b)(1) evaluation that any proposed discharge of dredged material is in compliance with the Guidelines. Section 4.14 Page 4-81 of the PEIS contains language referencing the *Evaluation of dredged material proposed for discharge in waters of the U.S. – Testing Manual* (EPA/USACE, 1998) testing protocols and the USACE's intention to employ these and/or similar guidelines for evaluating the proposed discharges of dredged or fill material into waters of the US. Additional language will be incorporated into Section 4.14 of the PEIS to further explain the USACE processes for the above.

Furthermore, Section 401(b) of the Clean Water Act specifies the guidelines for evaluation of dredged material discharges that must be considered under the Section 404 permitting process. The implementing regulations for these guidelines are provided in Title 40 of the Code of Federal Regulations Section 230 (40CFR230). These guidelines require:

- Evaluation of the loss of aquatic function and selection of the least damaging practicable alternative for discharge,
- Compliance with legal standards, including the water quality certification requirements of Section 401 of the Clean Water Act
- Prevention of significant degradation of aquatic ecosystems
- Use of all practicable means to minimize adverse environmental impacts

Testing requirements for dredged material and evaluation of discharge sites are provided in 40CFR230.60 and 230.61. The procedures and technical guidance for tests to evaluate impacts of proposed discharges are specified in Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual, U.S. EPA and USACE, 1998, EPA-823B-98-004, and Evaluation of Dredged Material Proposed for Ocean Disposal, U.S. EPA Office of Water, EPA-503-8-91/001 (also known as the "Green Book"). These test methods include procedures for tiered analysis of proposed discharges, starting with an evaluation based on existing data and proceeding to more sophisticated analyses as needed to address project uncertainties. Sediment and water quality evaluations required by these procedures address water quality impacts, toxicity impacts to bottom-dwelling organisms, and bioaccumulation of toxic compounds in bottom-dwelling organisms that may have other ecosystem impacts. Sediment testing, comparison to numerical sediment quality standards and comparison to reference sediments for impacts to aquatic life may be included in the monitoring requirements for permitted discharges.

As part of the permitting process for proposed discharges, the proposed discharge must be certified as complying with state water quality standards as required by Section 401(c) of the Clean Water Act. Test data and projected water quality impacts must be compared to adopted state water quality standards, and the state certifies, rejects, or places additional requirements for water quality protection on proposed discharges. As part of the permitting process, the USACE is required to follow the permitting regulations specified in 33 CFR320-330, including the consideration of public interest factors as required by 33 CFR 320.4, such as protection of water quality. In addition to the requirements for characterization of site conditions and sediment quality, the permit may include monitoring

requirements for assessment of impacts and requirements for mitigation measures during and after discharge.

In addition to the regulatory requirements for permitting, monitoring and mitigation specified under the Clean Water Act, the USACE has developed engineering practices to ensure the effectiveness and reliability of dredging and discharge operations. These technical requirements include evaluation of the physical, chemical and hydrologic suitability of discharge locations and sediment properties for proposed discharges. These requirements are specified in Engineering Manual EM 1110-2-5026, Engineering and Design: Beneficial Use of Dredged Material, USACE, 1987. These engineering standards must be followed for the design, approval and operation of dredging and discharge operations undertaken by the USACE.