



UNITED FOR A HEALTHY GULF

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CPRA Annual Plan FY 2016
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RE: Gulf Restoration Network Comments on the Draft FY 2016 Annual Plan

I am writing on behalf of the Gulf Restoration Network (GRN)¹

We welcome The Louisiana Coastal Protection and Restoration Authority's (CPRA's) commitment to a science-based plan for restoring the coast of Louisiana. Loss of our coastal wetlands is an issue of national scale and national priority, for which the state has taken a leadership role through the establishment of the CPRA and the State Master Plan (SMP) process.

The State Master Plan is an essential effort toward integrating protection and restoration projects, predicting outcomes for our coast from science, and evaluating different funding and policy scenarios. Although the actual SMP is updated every five years, we understand that planning process for 2017 is being conducted now, and that this is our opportunity to comment on that process and plan. The Annual Plan is the actuality of that general State Master Plan for a given fiscal year and a three year projection. The following comments build from our previous SMP comment and refer to the specifics of the Annual Plan FY 2016.

Floodproofing and relocation are urgent coastal needs. CPRA needs to coordinate the multitude of parish and federal efforts at resilience, provide capacity where it is lacking at the parish level, and plan to dedicate funding to “non-structural” floodproofing and relocation.

We have been encouraged by the recent discussion held on the flood-risk communication tool², and CPRA's coordination with various advocacy groups across the coast. These community sessions were important for starting and continuing discussions with parishes and local residents about the intricacies of securing persons and property against hurricane damage and devastation. This kind of effort should continue and provide an ongoing process for CPRA to hear the difficult discussions Louisiana residents are having with one another and with their local governments across the coast.

But the parishes and FEMA continue to bear the burden of providing planning, and funding for floodproofing residents, and no authority governs coordination among parishes or the difficult problem of relocation of communities. Residents are already leaving the coast, and our coastal cultures are

¹ A diverse coalition of individual citizens and local, regional, and national organizations committed to uniting and empowering people to protect and restore the resources of the Gulf of Mexico.

² <http://cims.coastal.louisiana.gov/floodrisk/>



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disintegrating as a result³. As the Coastal Authority, CPRA should materially provide for the parishes where capacity for local planning and floodproofing support are lacking, and provide a clearinghouse for best management practices for common problems in floodplain management. As the Coastal Authority, CPRA has an affirmative role to engage the real estate industry about the ways in which the private sector can sustain both the public interest as well as economic development in a “water management” sector. A significant economic development opportunity will escape the state if CPRA does not step into an authoritative role.

GRN staff have been working to organize a collaborative in the Greater New Orleans area to implement a water management strategy⁴ for the Greater New Orleans area, which is organized by the artificial “watersheds” that have been created by the levee and drainage system. Although pursuing the exact goals of the CPRA and master plan, and using a similar logic of funding infrastructure to avoid hurricane and other flood damage, the SMP and Annual Plan does not mention this strategy, what Orleans and Jefferson Parishes are doing or not doing to implement it, nor what or how other parishes can learn or can teach in order to achieve protection from flooding behind the levee walls.

Terrebonne Parish has a vigorous hazard mitigation program that could provide many lessons learned to Parishes.

Members of this collaborative have provided venues for parish employees to discuss the details and difficulties of navigating FEMA’s Community Ratings System (CRS), and how elements of the water strategy written for the Greater New Orleans do not fall neatly into CRS categories that FEMA has written for the majority of United States communities that do not live within a forced drainage system that receives 60 inches of rain a year. We are proud to be part of a collaborative that has provided a venue for informal interaction among parish employees concerned with aspects of permitting, stormwater management, planning, and hazard mitigation; but this role should belong to CPRA.

In 2010, engineering and planning consultants prepared a technical and educational guidance document for LDEQ⁵ that provides preliminary engineering plans and diagrams for residents and commercial facilities to implement best stormwater management practices. The goal of the report was to provide guidance for creating floodproof development in the GNO area post-Katrina. These BMPs are tailored to handle the volumes and the pollution unique to our developed coastal areas. GRN is involved in environmental permitting (DNR and LDEQ) that CPRA maintains authority over by statute and executive order. In our review of hundreds to thousands of wetlands and floodplain permits since 2010, the instances of these BMPs appearing in permit applications is vanishingly small, despite the enormous benefits to flood protection they could provide. It occurs to us that stormwater, pollution, and wetlands permits are an inconvenient venue for developers to have to consider appropriate engineering

³ [Community Resettlement Prospects](#) in Southeast Louisiana, [Water Resources Law Institute](#), 2015

⁴ <http://livingwithwater.com/projects/gnowms/>

⁵ Stormwater BMP Guidance Tool: A Stormwater Best Management Practices Guide for Orleans and Jefferson Parishes October, 2010 http://www.bayoulandrcd.org/files/Bayou_Land_Guidance_NO_BMP.pdf



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alternatives for their proposals, but currently there is no other venue to discuss why industrial developments should be planning to build-in additional floodproofing if they plan on building in coastal Louisiana. Instead, CPRA should be the leader in communicating to industry leaders and economic development departments the risks of not following these best practices.

This ‘non-structural’ engineering report seems to sit shelved and unread, in the same manner as many wetland restoration reports were until the CPRA began the State Master Planning process.

Waiting for FEMA is not a plan. If CPRA considers any floodproofing, resilience, or relocation activities listed here as outside its authority under Act 8 and like legislation, this should be made explicit. CPRA was created in response to the IPET’s concern about a lack of central authority governing hurricane protection, and we feel that there are many gaps in governance and coordination that CPRA could fill.

While we do not know precisely where the storm will strike this year, we know well which areas are vulnerable, and which populations are already migrating away from the coast. Some funding must be dedicated to implementing a non-structural program that allows communities to relocate together and plan together before the storm comes. We were hopeful to see more non-structural implementation than exists in the Annual Plan FY 2016.

We ask that CPRA dedicate funding in Annual Plan FY 2016-2018 to non-structural protection to match the spirit of the SMP, in order to establish coordination between parishes and agencies engaged in floodplain management and planning and provide funding and capacity where parishes are lacking.

CPRA HAS AN AFFIRMATIVE DUTY TO OUTLINE THE OIL AND GAS INDUSTRY’S LIABILITY FOR COASTAL RESTORATION

The oil and gas industry owes a large debt to Louisiana. This debt is measured in hundreds of thousands of acres of interior marshland⁶, and loss of the functions of those marshes for decades. Every year that debt is unpaid, and those former marsh areas remain in disrepair and billions of dollars in ecosystem services are lost⁷. As the industry moved out of the marshes and into deepwater, the coastal crisis

⁶ 249,152-397,818 acres, or 389.3 – 621.6 square miles of the Delta plain, 1932-1990. Penland et al, 2000. Process Classification of Land Loss in the Mississippi Delta Plan. USGS open file report [00-418](#).

⁷ Batker, David, et al. Gaining Ground. Wetlands, Hurricanes and the Economy: The Value of Restoring the Mississippi River Delta [Earth Economics](#).



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decelerated^{8,9} while increasing. As particular companies take advantage of Louisiana's horizontal drilling tax exemption to return to old oilfields, we have many concerns that 2015 will be the beginning of a new chapter of extractive impacts to coastal marshes while CPRA is restoring them.

CPRA has a duty to ensure that every cubic yard that can be used beneficially is used, especially in Terrebonne and Lafourche parishes, where the logistics of long-distance sediment delivery from major rivers that the state prefers is crippling implementation of marsh creation planned by the state. CPRA should recommend that DNR OCM should, by default, discourage propwashing of old canals, in favor of dredging techniques that allow beneficial use. To do otherwise is neglecting the public trust and abdicating its authority.

The oil and gas industry has had a hand in the majority (389.3 – 621.6 square miles) of wetlands loss of the state from 1932-1990, through different mechanisms. The extraction of oil and gas has sunk, smothered, or drowned the interior coastal marshes^{10,11,12} increasing the volume of tidal water eroding our exterior marshes and barrier islands.

The CPRA is in a unique position to resolve this long-standing conflict for the industry and define the industry's role is in paying for coastal restoration. The CPRA could and should act much more swiftly and systematically than the courts; and ultimately, the CPRA must approve restoration plans that result from any lawsuits.

Despite Coastal Use Law¹³, the industry's canals remain as ongoing, highly visible damage to the landscape. Many spoil banks still cover high-value edge marsh¹⁴ and interrupt natural hydrology.^{15,16}

⁸ Morton, R.A., G. Tiling, and N.F. Ferina. 2003. Causes of hot-spot wetland loss in the Mississippi delta plain. *Environmental Geosciences* 10:71-8

⁹ Couvillion, B.R., Barras, J.A., Steyer, G.D., Sleavin, William, Fischer, Michelle, Beck, Holly, Trahan, Nadine, Griffin, Brad, and Heckman, David, 2011, Land area change in coastal Louisiana from 1932 to 2010: U.S. Geological Survey Scientific Investigations Map 3164, scale 1:265,000, 12 p. pamphlet.

¹⁰ Morton, R.A., G. Tiling, and N.F. Ferina. 2003. Causes of hot-spot wetland loss in the Mississippi delta plain. *Environmental Geosciences* 10:71-8

¹¹ Robert A. Morton, Julie C. Bernier, John A. Barras, and Nicholas F. Ferina. USGS Open File Report 2005-1216 Rapid Subsidence and Historical Wetland Loss in the Mississippi Delta Plain: Likely Causes and Future Implications *see also USGS ofr 2009-1158 and ofr 2011-1169*

¹² Reed and Yuill, 2009. Understanding Subsidence in Coastal Louisiana

¹³ LAC Title 43 I.1 Chapter 7B §705.N *Areas dredged for linear facilities [Ch7A: including "pipelines, roads, canals, channels, and powerlines"] shall be backfilled or otherwise restored to the pre-existing conditions upon cessation of use for navigation purposes to the maximum extent practicable.*

¹⁴ Peterson and Turner 1994 The value of salt marsh edge vs interior as a habitat for fish and decapod crustaceans in a Louisiana tidal marsh *Estuaries and Coasts* Volume 17, Number 1, 235-262, DOI: 10.2307/1352573

¹⁵ Swenson and Turner, 1987. Spoil banks: Effects on coastal marsh water level regime. *Estuarine, Coastal Shelf Science* 24:599-609.



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As the CPRA attempts to restore fresh water and sediment sources from the river, as well as regular drainage regimes to our embattled marshes, these canals are an unnecessary hindrance to coastal restoration and the working coast.

We are happy to see outlines of these canals in maps of the planning effort for 2017, around Caernarvon in St Bernard and Plaquemines Parishes and in Cameron Parish but the areas with the most potential for restoration seem to evade evaluation by the state, and we fear that the state will again pay what the industry owes it.

Over 7000 acres of spoil bank surround even the unused canals in Upper Barataria and Western Terrebonne alone¹⁷. These canals lower the effectiveness of diversion projects, and should be backfilled by industry in areas targeted for hydrologic restoration.

This marsh restoration is cheap¹⁸ because it does not require pumping and dredging of sediment¹⁹; it is proven to improve the soil layer quickly²⁰, and it restores a more natural hydrology to most marshes on the coast. This technique, if applied coastwide, could improve hydrology for hundreds of square miles of marshes.

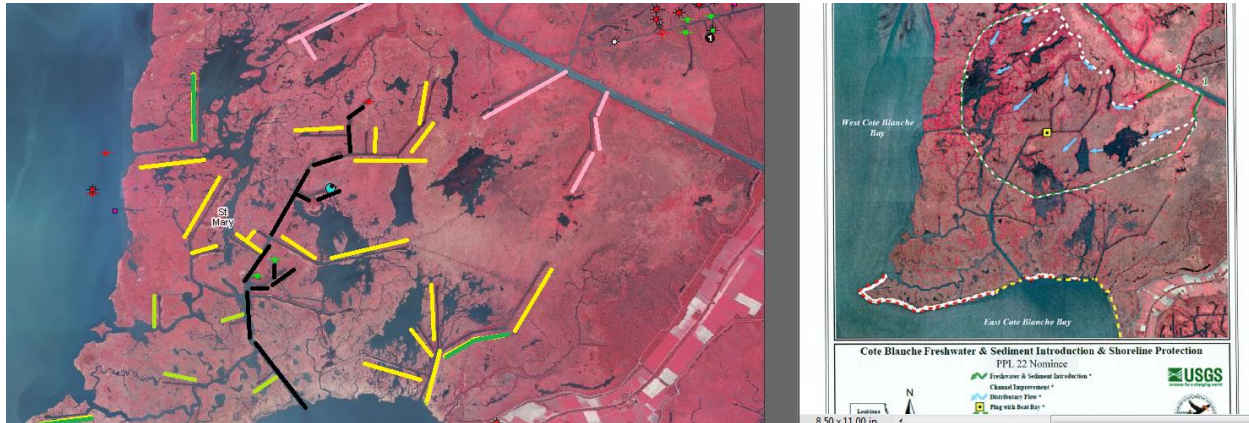
¹⁶ Bahr et al. 1983 Ecological characterization of the Mississippi Deltaic Plain Region : a narrative with management recommendations. U .S . Fish and Wildlife Service, Division of Biological Services, Washington, D .C . [FWS/OBS-82/69](#) . 189 pp

¹⁷ Eustis and GRN, 2013 internal memo. Available upon request in GIS formats.

¹⁸ \$7 million for 442 acres. PPL 22, R2-BA-10 Backfilling Canals in Jean Lafitte National Historical Park & Reserve

¹⁹ Baustian et al., 2009 Restoration of dredged canals in wetlands: a comparison of methods Wetlands Ecol Manage (2009) 17:445–453 DOI 10.1007/s11273-008-9122-6

²⁰ Baustian and Turner 2006. Restoration Success of Backfilling Canals in Coastal Louisiana Marshes. Restoration Ecology Vol. 14, No. 4, pp. 636–644



Example of a rationale²¹ for selective backfilling of inactive oil and gas canals north of East Cote Blanche Bay. Backfilling would assist hydrologically impacted marshes by re-establishing a more natural drainage pattern over a large area. Canals in black have a need to remain open. Canals in yellow are prioritized for hydrological restoration of the area in question. Canals in green are second priority. Canals in pink may remain deep for the sake of diverting fresh water from the Intercoastal Canal.

This Cote Blanche restoration proposal before the RESTORE Council has been criticized for attempting to implement a failed strategy of hydrologic restoration. CPRA could provide the legal and technical assistance on backfilling that could alter this necessary project into a successful one.

CPRA, as the lead restoration agency, has a duty to the public as well as to industry, to outline the liabilities of the oil and gas industry.

We are happy to see that SMP 2017 is evaluating the impact of restoration of these canals in certain watersheds targeted for hydrological restoration.

²¹ Eustis et al, 2012 *State of the Coast* 2012



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CLIMATE CHANGE MEANS INCREASING SEA LEVEL RISE, BUT ALSO INCREASING INSTABILITIES, FOR RAINFALL, THE RIVER, AND FINANCES

The SMP should encourage planning for an upper bound to sea level rise at 2 meters by 2100, in order to be better prepared for a “worst-case” predicted scenario.

However, changing the climate does not only mean increasing the rate of sea level rise. The changed climate will mean increased mean temperatures across the state, as well as increased frequency of intense rain events and prolonged periods of drought²².

While an individual flood seems unpredictable, the new climate system contains an increased likelihood of large rain events due to the increased capacity for water in the hydrological cycle because of increased air temperatures²³. The Mississippi Flood of 2011 was so large because of record rains in the Ohio valley²⁴, even as Texas and western parts of Louisiana faced and still face an unprecedented period of intense drought.

Although tying the revenues of the annual financial plan to oil and gas profits and revenues is appropriate in the short-term, the State Master Plan should recognize the possibility that oil and gas reserves represent a financial “bubble²⁵” that will be revealed over the next fifty years. To avoid catastrophe, the current carbon budget for the climate system should be set at 565 GtCO₂ to 2050²⁶. Known global reserves of oil and gas are approximately 615 GtCO₂ and 363 GtCO₂, respectively; thus they exceed this budget²⁷. Reserves that exceed this budget are at risk of being devalued, especially in a capital-intensive industry like oil extraction.

The CPRA should consider the financial implications of tying restoration programs to declining future extraction revenues.

²² Twiley, Robert, 2007 [Gulf Coast Wetland Sustainability in a Changing Climate](#). Excerpted from the full report, Regional Impacts of Climate Change: Four Case Studies in the United States.

²³ Trenberth, K. E. 2011: Changes in precipitation with climate change. *Climate Research*, 47, 123-138, doi:[10.3354/cr00953](#).

²⁴ Dr. Jeff Masters, 2011 [Tornadoes, floods, and fires continue to pound U.S.](#) Meteorological weblog. Retrieved May 2011

²⁵ Mark Campanale & Jeremy Legget. Unburnable Carbon – Are the world’s financial markets carrying a carbon bubble? accessed at [carbontracker.org](#) Feb 2012

²⁶ *Id.*

²⁷ *Id.*



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CPRA SHOULD OUTLINE CARE FOR THE RIVER AND THE LANDS BUILT

In 2012 CPRA ordered a bathymetric study, to be authored by the State's Center of Excellence, of the impact of a proposed coal terminal upon the Myrtle Grove sediment diversion directly downstream. This study, initiated by the regulatory process, is an example of what opportunities are available, through a robust regulatory program, for industry to pay for changes in planning and adaptations the restoration and protection program must make for private interests.

Unfortunately, this study was hidden by the company, and not made public for environmental review, and was not incorporated into the company's permits. Rather than incorporate the results of that study into the regulatory process, the CPRA signed an unprecedented contract with the coal terminal, allowing them say over the management over a keystone river restoration project. **The CPRA has set bad precedent and missed a key opportunity by ignoring the RAM Terminal CFD Modeling Technical Memorandum.**

CPRA has objected to the Corps' use of the Alliance sandbar in the past, it should extend the same criticism to oil and coal export terminals that seek to "lock away" this invaluable coastal resource.

CPRA must withdraw from its MOA with RAM Terminal, as this agreement sets bad precedent for management of diversion projects and future conflicts with private interests.

CPRA must consider how strengthened environmental review and enforcement can provide necessary scientific and planning opportunities, as well as make coastal restoration more sustainable.

The CPRA should consider a uniform set of practices for arranging land use of restored lands, and not negotiate land use project by project, landowner by landowner.

Thank you for your consideration of these comments.

For a healthy Gulf,

A handwritten signature in black ink, appearing to read "Scott Eustis", is written over a light blue rectangular background.

Scott Eustis, M.S., Coastal Wetland Specialist, Gulf Restoration Network