



Legacy Diversion Workshop

October 6 and 7, 2015

AGENDA

What can we learn from existing Mississippi River outlets (legacy diversions) to inform the planning, design, construction, operation, monitoring and adaptive management of future diversions?

Workshop Details

Location: Southeastern Louisiana University
Large Ballroom on the 3rd floor in the Student Union
Registration is free but you must register to attend

[Click here](#) to register

Contact Theryn Henkel with questions:

therynhenkel@gmail.com

504-308-3470



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October 6

8:30 am – Registration

9:00 - 10:00 am – Opening Remarks

John Lopez, Lake Pontchartrain Basin Foundation - The importance and limitations of legacy diversions to coastal restoration planning

10:00 am - 12:00 pm – Soils and Below Ground Productivity

10:00 am – **R. Eugene Turner**, Louisiana State University - Mineral and organic soils, and deltas: there's a difference

10:20 am – **Kevin Xu**, Louisiana State University - Sediment texture and erodibility in West Bay and Caernarvon diversions

10:40 am – **Ronald Paille**, U.S. Fish and Wildlife Service - Recent marsh soil changes in the Davis Pond Freshwater Diversion ponding area

11:00 am – **Sean Graham**, Nicholls State University - The effects of nutrient enrichment on wetland functions and stability

11:20 am – **Gregg Snedden**, USGS National Wetlands Research Center - Inundation and salinity impacts to belowground productivity in the Mississippi River Deltaic Plain

11:40 am – Discussion

12:00 pm – Lunch

12:40 - 2:40 pm – Legacy Diversions as Analogues for Sediment Diversions

12:40 pm – **Christopher Esposito**, Tulane University, Zhixiong Shen and Torbjorn Tornqvist - Building the Mississippi River Delta with silt and clay: The texture and sediment retention efficiency of two crevasse splays

1:00 pm – **Robert Twilley**, Louisiana State University - Ecosystem processes of newly emergent coastal deltaic floodplains of the Mississippi River

1:20 pm – **J. Andrew Nyman**, Louisiana State University - Small sediment diversions in the Bird's Foot Delta

1:40 pm – **Alex Kolker**, LUMCON and Tulane University - Sedimentation patterns in diversions and diversion analogues: The importance of basin-side controls and geomorphic scaling parameters



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2:00 pm – **Christopher Swarzenski**, USGS Lower Mississippi Gulf Water Science Center - What the Gulf Intracoastal Waterway and the Wax Lake Outlet/Lower Atchafalaya River Delta complex can teach us about controlled diversions off the Mississippi River

2:20 pm – Discussion

2:40 pm – Break with refreshments

3:00 - 4:40 pm – Fisheries and Diversions

3:00 pm – **Tom Soniat**, University of New Orleans and Aimee Preau, Lake Pontchartrain Basin Foundation – Freshwater diversions, legacy salinity data and oyster Habitat Suitability Index models

3:20 pm – **Earl Melancon**, Nicholls State University - Consequences to an oyster population during a low-salinity spring to summer event: A useful lesson for diversion management of a basin fishery

3:40 pm – **Shaye Sable**, Dynamic Solutions, LLC - The development and application of a food web model to evaluate operational alternatives for existing and planned freshwater diversions

4:00 pm – **Malinda Sutor**, Louisiana State University - Effects of diversion release on the plankton community in the Breton Sound Estuary

4:20 pm – Discussion

4:40 pm – Closing Remarks

5:00 pm – End

October 7

9:00 am - 12:10 pm – Delta Development and Sediment Transport

9:00 am – **John Day**, LSU and Comite Resources, Robert Lane, Paul Kemp, Gary Shaffer, Adrian Wiegman and Jeff Rutherford - Very large infrequent diversions to address 21st century megatrends: The only way to sustainability

9:20 am – **Gary Brown**, U.S. Army Corps of Engineers - The Physics of Diversions

9:40 am – **Ioannis Georgiou**, University of New Orleans - Hydrodynamic and geomorphic controls on delta development: Observations and modeling in the modern delta and the Wax Lake Delta

10:00 am – **John Lopez**, Lake Pontchartrain Basin Foundation - Sedimentologic aspects of the Caernarvon Freshwater Diversion and the Bohemia Spillway including Mardi Gras Pass

10:20 am – Break



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10:30 am – **Ehab Meselhe**, The Water Institute of the Gulf - Morphodynamic analysis of a proposed network of sediment diversions

10:50 am – **Mead Allison** and Melissa Baustian, The Water Institute of the Gulf - Recent Water Institute observational studies of Mississippi River diversions at West Bay, Bonnet Carré Spillway and Davis Pond and Caernarvon Freshwater Diversions

11:10 am – **Erin Plitsch**, Coastal Protection and Restoration Authority - Beneficially-placed dredge material and diversion sediment capture: A look at the West Bay Sediment Diversion project

11:30 am – **John Lopez**, Lake Pontchartrain Basin Foundation - Geomorphic responses to river reintroductions at the Caernarvon Freshwater Diversion, Bohemia Spillway and Fort St. Philip

11:50 am – Discussion

12:10 pm – Lunch

1:00 - 2:40 pm – Basin Side Landscape Ecology

1:00 pm – **Dubravko Justic**, Louisiana State University - Effects of sediment diversions on water quality in deltaic Louisiana estuaries

1:20 pm – **Jenneke Visser**, University of Louisiana at Lafayette - Predicting effects of sediment diversions using existing landscape analogues in coastal Louisiana

1:40 pm – **Beth Middleton**, USGS National Wetlands Research Center - Freshwater hydrological remediation of swamps to improve tree condition

2:00 pm – **Theryn Henkel**, Lake Pontchartrain Basin Foundation - Vegetation patterns in the Bohemia Spillway and swamp restoration in the Caernarvon Diversion outfall area

2:20 pm – Discussion

2:40 pm – Break with refreshments

3:00 - 4:00 pm – Plenary Session: Using the History of Diversion Operations and Management to Maximize Future Diversion Benefits and Avoid Pitfalls

Andrew Wilson, Simon, Peragine, Smith & Redfern, LLP - “Diversions: No good deed goes unpunished”

Followed by question, answer and discussion: **How can we avoid the pitfalls and issues of operations and management learned from diversions to improve future diversions?**

4:00 – 4:10pm – Closing Remarks and End

