The Giving Delta

Changing Course
National Conference On Ecosystem Restoration
Coral Springs
Thursday 21st April 2016

Moffatt & Nichol | West 8 | LSU CSS
Deltares | RAND | Ioannis Georgiou | Headland & Associates
The dynamic deltaic coast is Louisiana’s greatest opportunity.

While other cities, economies, and communities around the globe lie exposed to rising seas on fixed coastal edges, Louisiana will leverage the Mississippi River to build and maintain a robust wetland zone. Using the power of the Mississippi River, Louisiana’s ecosystem, economy, communities, and culture will adapt to increasing uncertainty.
systems approach
empower the river
Achieving the Multi-Purpose Functions of the Giving Delta

- Build and sustain wetlands
- Secure economic indispensability
- Strengthen living culture
2015: Dispersed, Fragmented, Uncertain

Future: Integrated, Focused, Defined
embrace change
Ecological Context:

- Sea level rise means an inevitably shrinking Delta
- Five distinct basins are in various stages of transgression or progression
Functional flood-pulse ecosystem of Atchafalaya River basin
100 year, 4 Generation Timeframe

Four Generations

- Individuals do not think in 100-year increments
- Develop an actionable strategy from small business to global commerce
1st Generation - Connect: From Flood Control to Controlled Flood-Pulses
2nd Generation - Align: Transform the Lower River
3rd Generation - Adapt: Consolidation and Economic Dividends
4th Generation - Position for Change

Salt Marsh Zone
Brackish Marsh Zone
Freshwater Marsh
Coastal Forest
Generation 4 - Status quo
Connecting The River

1. Salinity And Residence Time
2. Controlled Floodways & GIWW
3. Multi-height Spillways
4. Sediment Traps with Dedicated Dredging
5. River Cut and Port Sulphur
6. Sand Engines
Annual Sediment Volumes

**CURRENT TOTAL:**
- 0.9 MCY Silt + Clay
- 0.2 MCY Sand

**700 ACRE-FT / YEAR**

**PROJECTED TOTAL:**
- 11.7 MCY Silt + Clay
- 11.6 MCY Sand

**15,000 ACRE-FT / YEAR**
5 Distinct Places, Economies, and Environments
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