



Coastal Sustainability Program

Bohemia Spillway

The Bohemia Spillway provides an opportunity to observe natural processes at work! It is located in Plaquemines Parish on the east bank of the Mississippi River about 35 miles southeast of New Orleans, LA. In the 1920's Mississippi River stages at New Orleans were becoming higher and more threatening, and so the Bohemia Spillway was authorized in 1924 by the Louisiana State legislature for the purpose of creating a river flood relief outlet and reducing flood risk to New Orleans. The Bohemia Spillway was completed in the Fall of 1926 by the Orleans Levee District with the removal of the artificial Mississippi River levees, and remarkably just two months before the onset of the Great Flood of 1927. The spillway has a broad elevated river bank (natural levee) that slopes gently to the marsh and to Breton Sound. Since 1926, the natural levee of the Bohemia Spillway has been periodically overtopped during flood events on the Mississippi River.

Why Study the Bohemia Spillway?

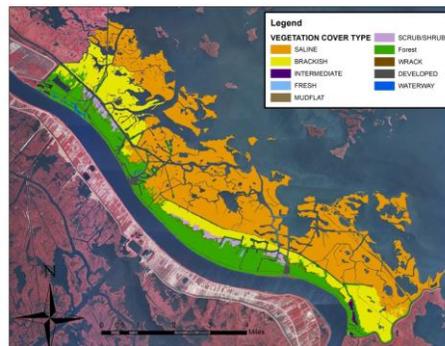
- Offers glimpse into how the river and wetlands interacted before levees
- See the effects of pulsed overbank flow on wetlands
- Land loss rates are low in the spillway

LPBF Research Program

- Investigating since 2007
- Studied the floods of 2008 and 2011
- 2010 survey of the Bohemia Road that runs the length of the spillway along the natural levee
- Extensive hydrologic survey during the flood of 2011
- Geomorphic analysis of the spillway
- 2010 vegetation study
- Land loss and land gain analysis



Bohemia Road flooded in 2011



Vegetation Types in The Spillway



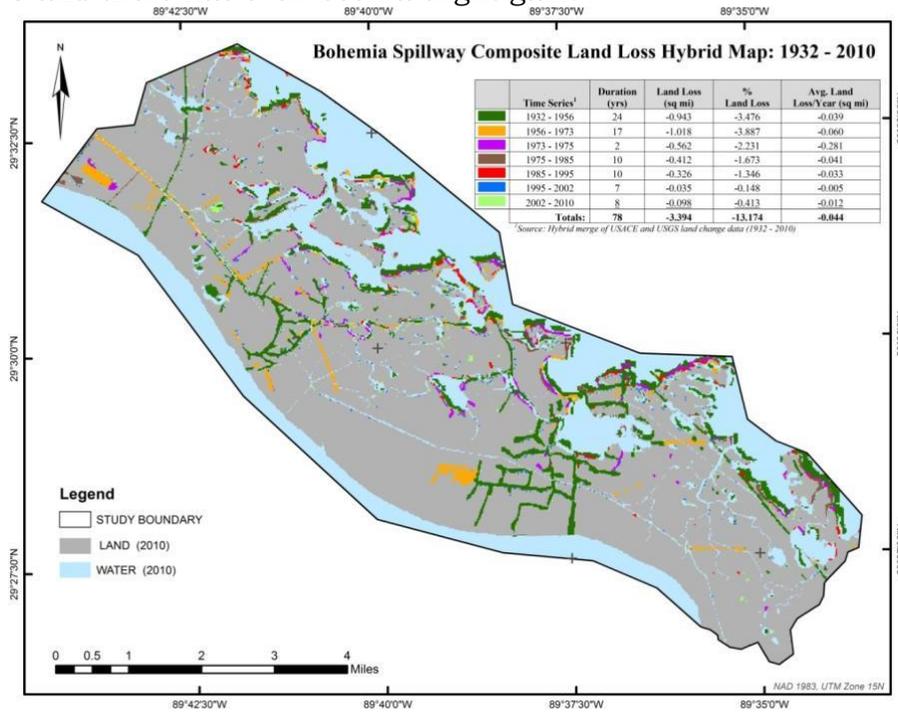
Water rushing over land

A full report on the Bohemia Spillway can be found at:

http://saveourlake.org/PDF-documents/our-coast/Bohemia/Bohemia%20Report_March2013.pdf

Major Conclusions

- Overtopping waters were captured quickly by small channels, little overland flow was observed
- Land loss rates in the spillway are less than other parts of the coast. There has been no net loss since 1995 and there has even been a slight gain!



Land loss in the Bohemia Spillway 1932-2010 showing low land loss since 1975

- Many navigation and oil and gas canals are infilling, a rare site in southern Louisiana



Navigation and oil and gas canals are infilling in the Bohemia Spillway

- Pulsed flow from the Mississippi River in flood years contributes to the sustainability of the marshes in the spillway