

## **Legal Aspects of Coastal Change: Geology is about ‘What's a Fact?’ while Law is about ‘Which Facts Matter?’**

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### **ABSTRACT**

This 2016 work updates new geological research on causes of coastal change in southeastern Louisiana with major case results since my Gulf Coast Association of Geological Societies presentation and publication last year. Coastal change is unlikely to require new law but properly dealing with its effects and planning our response to them will require more than just a good understanding of present law. Statutes rest on fundamental—but often unstated—societal assumptions favoring some outcomes and denying others. For example, Western societies presume land should remain in commerce and always be productive. Virtually all of the major cases and controversies concerning water and/or coastal issues arising around the nation in recent years—property damage and land loss during hurricanes due to exploration and production (E & P) canals, increased expenses to levee boards from a subset of those same E & P canals, diversions affecting oyster beds, beach front lot owners objecting to beach restoration projects, and anthropogenic climate change causing increasing hurricane damage—were all resolved by applying existing law. Many of those laws are not just based upon Roman laws going back over 2000 years; some are almost word-for-word copies of them. Unfortunately, much of the general public either does not understand the basic principles of land use and tort or perhaps simply wishes for different outcomes despite existing (and well-settled) laws. Worse, there does not seem to be sufficient appreciation of the underlying geological factors driving changes in and along our coasts, marshes, and swamps. Law as an institution has never attempted to ‘control nature’ per se but it most assuredly attempts to specify and control who gains and who loses—and why—when a river changes course, when new land forms at the beach, and when a dispute breaks out as to ‘Where is the beach?’ and ‘Who owns it?’ A general overview of the major cases and an explanation of why they turned out as they did will better enable coastal planners to find—and stay within—more realistic limits of what can and cannot be accomplished within the framework of our existing laws. Moreover, if American society does determine a new direction in coastal programs is needed, a fuller understanding of current law will likely allow better choices to be made consciously. However, because law can only help illuminate the choices and assign the risks to various parties, ultimately geology—not law—is the key to future decisions about our coastlines.