Current sea level rise projections present substantial challenges, and the world is watching New Orleans. On March 29, the city took a step in the wrong direction by choosing litigation as the best path forward. Perched on one of the world’s great river deltas, New Orleans experiences natural rates of subsidence that are two to three times the rate of global sea level rise. This means that New Orleans will experience the relative impacts of sea level rise before almost anyone else does. New Orleans has the task of showing the way.

For the last decade, New Orleans has performed admirably at this task. About $14 billion has been invested in flood protection, and the Greater New Orleans Urban Water Plan is incorporating an intelligent approach to managing water within that infrastructure. The biggest advances have been in the application of science to the challenges ahead. The Departments of Earth and Environmental Sciences at UNO and Tulane, along with the Coastal Research Laboratory at UNO and the ByWater Institute and its River and Coastal Center at Tulane, are world-class institutions leading the study of coastal processes — and how best to face the challenges of subsidence and rising sea level.

Over the past five years, the New Orleans Geological Society has worked with UNO, Tulane and the University of Louisiana at Lafayette to provide access to oil and gas industry seismic data to study the geological processes associated with subsidence. Since 2014, more than $350 million in industry seismic information has been made available for academic research in this field. The first published study to use industry seismic data came from a cooperative research project between Tulane and the University of Texas at Austin. This study used a 500-square mile, 3D survey in Plaquemines Parish to map 28 geological faults. The study found that most of these faults extended to the surface, and several of them “correspond to abrupt shifts from emergent wetlands to fully submerged areas of open water.” In other words, movement on the faults is causing the wetlands to submerge. The research at the universities since the publication of this study is showing that many, if not most, of the hot spots of wetlands loss are directly associated with geological faults.

The role that NOGS is playing to coordinate sharing the oil and gas industry seismic data with the universities is exactly what is called for by the National Academies of Science report on the future of the Gulf Coast published last year. The study specifically recommended efforts to remove “barriers to communication between the energy industry and other stakeholders” and to find ways to “engage more effectively to facilitate information sharing.”

The lawsuit filed by the City of New Orleans against a group of oil and gas companies tears at the fabric of this cooperative relationship. It couldn’t have come at a worse time. The March 20 Board of Directors Meeting of the Coastal Protection and Restoration Authority (CPRA) featured a presentation by Krista Jankowski, a CPRA geologist and Tulane graduate. She gave an overview of the science and research that is going into the development of the 2023 Master Plan. It featured the research partnerships that CPRA has with Dr. Mark Kulp at UNO and Dr. Nancye Dawers at Tulane, and it showed the trace of the Ironton fault that is projected to cross near to the site of the proposed Mid-Barataria Sediment Diversion. The research collaboration among CPRA, UNO and Tulane is based almost entirely on the use of oil and gas industry seismic data to study faulting and subsidence. The critical study of the Ironton fault and other faults across coastal Louisiana will require an expansion of that cooperative relationship.

In direct contradiction to the cooperative efforts among the oil and gas industry, the local universities and CPRA to bring the best available science to the development of the 2023 Master Plan, the city’s lawsuit is not based on any scientific study of the causes of wetlands loss. The contentions of the lawsuit are not supported by any active university research, and they are not reflected in any way in the development of the Master Plan. The City of New Orleans needs to reverse this misstep and get back on track to showing the rest of the world the way forward by working cooperatively with all stakeholders in the coastal zone, including the oil and gas industry.

Originally published as a guest editorial in Baton Rouge’s The Advocate on April 16th, 2019.

Reprinted in the May 2019 issue of the NOGS LOG.