December 12, 2014

Geological Sciences in the Pulp and Paper Industry

Joey C. Hebert, Georgia-Pacific

Abstract: Georgia-Pacific operates one of the largest US pulp and paper facilities in nearby Zachary with over 900 employees manufacturing consumer products that include brand names Brawny Paper Towels, Angel Soft Tissue and GP Spectrum® Copy Paper. The site is also part of the longest siege in US military history, the Civil War Battle of Port Hudson. Paper making is a mechanical and chemical process that involves many geological sciences and resources. These include radionuclides, clay, groundwater supply, environmental assessment, siting evaluations, and reuse/recycling. The presentation will include samples of the paper making process.

Bio: Joey Hebert has been an environmental engineer at Georgia-Pacific Port Hudson Operations in Zachary for the last 18 years. He was a 1985 Graduate of LSU in geology, served at the La Department of Environmental Quality from 1985 to 1990 and was a Scientist at Geraghty & Miller in Baton Rouge from 1990 to 1996. Mr. Hebert has been a Commissioner on the Capitol Area Groundwater Conservation Commission and currently lives in Zachary.

November 14, 2014

The Ragin' Cajun Imperial Barrel Award Experience!
Daniel Sutton and Jolie Helm, Team Members & Graduate Students, University of Louisiana at Lafayette

Abstract: The 2014 award-winning team from the University of Louisiana at Lafayette will be sharing their Imperial Barrel Award (IBA) experience. The IBA program gives students the opportunity to evaluate prospective basins and compete against other universities on a global scale. The rigorous, eight-week competition challenges the students to not only analyze technical data, but also to think creatively, work as a team, and adhere to strict deadlines. The team members, represented by Sam Ely, Daniel Sutton, and Jolie Helm, will elaborate on their involvement, preparation, and mentorship that ultimately led to the team's success.
Please forward this on to any who may otherwise be interested.

October 10, 2014

Tuscaloosa Marine Shale and Unconventional Drilling in Louisiana
Gifford Briggs, Vice President, Louisiana Oil and Gas Association

September 12, 2014

Mars?!?! An Interview with Randy Paylor, Hydrogeologist and LSU PhD Candidate

Randy Paylor and Joey Hebert

Abstract: An Interview with Randy Paylor will be conducted by Joey Hebert, BRGS Vice President. We will learn about Randy Paylor's interest in karst hydrogeology and his current PhD area of study. We will also learn more about Mr. Paylor's interest in Mars and the Mars One program.

Biography: Mr. Paylor is a hydrogeologist and Ph.D. candidate at Louisiana State University. He is also one of 200,000 candidates who applied to be a part of the privately funded Mars One mission. The mission hopes to establish a permanent human presence on Mars. The pool of candidates has been narrowed and Mr. Paylor can count himself as one of the current group of 705 willing candidates.

May 9, 2014

Effective Site Characterization using the Triad Approach; Fredeman Pit Site, Sulphur, Louisiana

William H. Schramm, George Losonsky, William Davis, Ray Sturdivant, Mike Kyle, Scott Bergeron

Abstract: The Louisiana Department of Environmental Quality (LDEQ) has been tasked with the investigation and cleanup of an abandoned parcel of contaminated property in Calcasieu Parish. The Fredeman Pit Site had been used for the unpermitted disposal of barge cleaning waste prior to the establishment of the department. Previous owners have partially investigated the site however, a comprehensive conceptual site model (CSM) had not been developed. In order to understand the site conditions and provide data for the development of a CSM and a remedial action plan (RAP), Eagle Environmental was contracted to execute site investigation and site characterization activities using the Triad Approach.The Department, contractor and subcontractors used the Triad Approach to research, plan and execute the investigation in one massive undertaking during the summer of 2012. This talk will present the strategies, research, plan development, lines of communication, organization, field investigation, analytical testing and compilation of all data that comprised the CSM.The data intensive, cost effective and timeliness of the Triad Approach resulted in a very successful investigatory program,

provided a new understanding and CSM and afforded the opportunity to direct our future efforts for remediation through a focused Corrective Measures Study.

Biography: William H. Schramm is a 20+ year veteran of the Louisiana Department of Environmental Quality. As a Geologist III he has worked closely with industry, consultants and private citizens to investigate and/or remediated over 3000 contaminated sites. His main focus is on groundwater issues throughout Louisiana. Since 2005 he has been an Adjunct Instructor on the staff of the Department of Geology at the University of Louisiana-Lafayette and served on numerous Graduate Thesis Committees. Mr. Schramm holds a BA and MS in Geology and a Teaching Certification for K-12 in Science and Earth Science. He is a member and past Director, twice past Vice-President/President of the Baton Rouge Geological Society. He also serves on the Board of Directors of the Louisiana Environmental Health Association, and ComForCare Senior Services. Mr. Schramm serves as Delegate to the AAPG, representing the Baton Rouge Geological Society AAPG members. He has participated in numerous conferences, conventions and seminars as organizer, committee chair, session chair, judge, presenter and author/coauthor with over 35 papers or abstracts in publication. His off time is spent fostering children, doing carpentry and trying to find time to travel with his wife Mary.

April 11, 2014

DNR FEASIBLE PLANS (Order 29-B): LESSONS LEARNED

George H. Cramer, P.G., ARCADIS U.S.

Abstract: Chloride impact constitutes the bulk of alleged property damages related to commercial oil and gas operations. Subsequently, petroleum companies, landowners and consulting experts are especially concerned with the treatment of chlorides in soils and groundwater. However, none of the regulatory standards applied to both environmental media (soils and groundwater) specifically address chlorides, and chloride impacts. The Department of Natural Resources (DNR) has recently issued several Feasible Plans in response to “Legacy Lawsuits” under Chapter 6 of Statewide Order 29-B. These “DNR Plans” provide insight into the manner in which the agency interprets its regulations. The interpretation of the data by DNR is critical to understanding the decisions the agency makes regarding remediation of chloride impacts. This presentation will look at several of the recent DNR Feasible Plans in an effort to determine what lessons can be learned regarding acceptable remediation to the agency.

Biography: Mr. Cramer obtained a B.S. degree from Wheaton College and an M.S. degree from LSU, both in geology. He is a licensed Professional Geologist in Arkansas, Kentucky and Tennessee. He worked for 13 years as a geologist and then environmental analyst for the Louisiana Department of Highways, later

Department of Transportation and Development before transferring to the Department of Environmental Quality. He served nine years with the Department of Environmental Quality and its predecessor the Environmental Control Commission. He is a recognized expert in Gulf Coast geology and hydrogeology. His entire career has been focused on Gulf Coast soils and shallow groundwater, and his services are widely used by attorneys as an expert witness. He has been hired in many oilfield cases to review the work of other experts and evaluate proposed remediation plans. He and his staff submitted one of the first remediation plans to the Department of Natural Resources that was approved under Act 312. Mr. Cramer was a founding member of the Baton Rouge Geological Society (BRGS) in 1979 and served as a BRGS officer and board member from 1981 through 1985.

March 14, 2014

Rethinking Coastal Restoration
Chris McLindon

Abstract: The fundamental concepts underlying coastal restoration were formulated in the 1960's and 1970's as it became obvious that the total surface area of the wetlands of south Louisiana was decreasing at a measurable rate. The situation has been generally characterized as an ecological crisis in which the wetlands are being deteriorated by coastal erosion and the rate of land loss is unprecedented in human history. The causes of coastal erosion have been universally attributed to the activities of humans. Oil and gas drilling and pipeline canals have allowed saltwater intrusion to accelerate erosion, and the levee system along the Mississippi River has prevented a natural cycle of flooding that would replenish the marsh with freshwater and sediment. The solution to this crisis, and the foundation of coastal restoration, is that humans must intercede to reverse the rate of wetlands loss. These concepts have become the axiomatic truths of the coastal restoration movement, and they are rarely questioned. An examination of the science behind the formation of the coastal wetlands brings into question all of these fundamental concepts, along with the viability of human intercession. The coastal wetlands of southeast Louisiana are the delta marshes of the Mississippi River. Six to eight historical deltas are generally recognized to have deposited the sedimentary substrate of the marshes across the area during the Holocene highstand in global sea level. Each of these deltas exhibits the patterns of a natural lifecycle from emergence to abandonment to subsidence. The rates of sediment accumulation and subsidence of these deltas can be related to the underlying geologic structure of the coastal plain. The area of delta deposition during the Holocene is roughly coincident with the span of delta deposition during the Middle Miocene, and it is instructive to compare the relationship of patterns of sediment accumulation during these two epochs. This evaluation strongly suggests that the current rate of wetlands loss is due largely to subsidence driven by geologic processes that have been active on the coastal plain since the Middle Miocene.
An examination of coastal restoration projects that have been in operation over the past 20 years reveals that they have been largely ineffective in reversing the rate of wetlands loss in southeast Louisiana. In the face of the magnitude of geologic processes that are driving the rate of subsidence

causing the submergence of the coastal wetlands it is unlikely that any of the active or proposed coastal restoration projects will be capable of offsetting that rate

Biography: Chris McLindon received a B.S. in Geology degree from L.S.U. in 1979. He has been employed as an exploration geologist in the oil and gas industry in New Orleans since graduation, including eight years of self-employment. Throughout the course of his career Mr. McLindon maintained a very strong interest in the processes of the Mississippi River and its current and historical delta. He has actively researched the subject throughout his career with periods of scientific investigation and evaluation. All of the research and scientific evaluation included in this presentation were undertaken during periods of self-employment. All of the content and opinions expressed in the presentation are solely those of Chris McLindon, and he is not acting as a representative of any entity other than himself. Mr. McLindon is a member of the American Association of Petroleum Geologists and the Geological Society of America.

Febuary 14, 2014

Developing an Education Curriculum for Water Resource Management: An Example from Baton Rouge

Matthew Reonas, Louisiana Office of Conservation

Abstract: As has been discussed at previous BRGS meetings, saltwater encroachment is a well-documented problem in the Baton Rouge area. The Office of Conservation, which has regulatory authority over not only the development of Louisiana's petroleum and natural gas reserves, but also the sustainability of the state's groundwater resources, has been focused on working out an effective management solution to this issue with the Capital Area Groundwater Conservation Commission and major local users.

One of the agency's key platforms has been an insistence on public education and transparency. In support of this educational commitment, Conservation began the development in the fall and winter of 2012-13 of a curriculum aimed at students studying physical, earth, and environmental science in Baton Rouge schools.

Utilizing a "science in your own backyard" approach, and drawing on readily available resources from the U.S. Geological Survey, the Capital Area Groundwater Conservation Commission, and other organizations, Conservation staff, assisted by other professional educators, produced several different lesson plans dealing with local sustainability and management issues and worked with teachers to educate them about the issues involved and how they could utilize the curriculum or the subject matter generally to improve "scientific literacy" in the classroom.

This paper will explore the challenges and questions faced by the Office of Conservation in dealing with such a sensitive environmental issue, but one which provides a ready-made opportunity for learning.

Biography: Mr. Reonas is a communications officer with the Louisiana Department of Natural Resources/Office of Conservation, where he handles education, research, and government and public relations in the area of groundwater policy. He was recently nominated as the Commissioner of Conservation's appointee to the Capital Area Groundwater Conservation Commission and he has been involved in groundwater management and planning issues around the state over the past two years. He holds both his M.A. and Ph.D. degrees from LSU, and has worked extensively in state government as a project manager and research specialist in educational development.

January 10, 2014

Coastal Land Loss and Landscape Level Plant Community Succession; An Expected Result of Natural Tectonic Subsidence and Fault Movement.

Kathy S. Haggar, Riparian, Inc

Abstract: The signature of subsidence, so common to south Louisiana, is present at Goose Point. This paper discusses possible fault-driven subsidence along the Baton Rouge Fault System as the primary driving mechanism for vegetation change and marsh loss at Goose Point. Goose Point, Louisiana is located on the north shore of Lake Pontchartrain about 32 kilometers (20 miles) north of New Orleans, Louisiana. Until the 1950's Goose Point was a stopover for geese migrating through the north shore of Lake Pontchartrain. (However, nineteenth century coastal surveys called the area "Ragged Point" at least as late as 1889.) The huge flocks fattened up on the vast acres of Three Cornered Grass (Shoenoplexus americanus) (Glockner 2008). Today the Three Cornered Grass has been nearly completely replaced by Salt Meadow Cord Grass (Spartina patens). Not surprisingly, few geese visit the area today.What makes Goose Point so interesting from a subsidence standpoint is what is not present. The typical factors put forward to explain coastal land loss in Louisiana are levees, fluid extraction, E&P (exploration and production) canals, and salt water intrusion. However, Goose Point's marsh losses cannot be attributed to any of the usual surface or near surface causes because most of these factors either don't exist at all, or don't exist in any magnitude capable of producing the miles of observable marsh loss and plant community change. The few water wells at the camps along Lake Road are too small to affect thousands of coastal acres of marsh fringing the North Shore. The same is true for a few oil and gas wells in the lake to the east off Big Point. Never considered much of a field, these wells have been virtually abandoned since the late 1990's. Therefore, the most likely causes responsible for the marsh loss and plant community migration must be something bigger and deeper. Tectonic deformation associated with the Mississippi River Delta and - perhaps more directly - faulting associated with onshore segments of the Baton Rouge Fault better explain these losses than any of the conventional causes typically assigned to coastal marsh loss.The Baton Rouge Fault System trends northwest - southeast along the north shore of the lake with active fault segments through the lake (Lopez 1996).

Prominent lineaments have been mapped as onshore components of the Baton Rouge Fault System (Saucier 1994, Gagliano et al. 2003). These features are very distinctive on the 1998-99 LIDAR flown by the state of Louisiana. Goose Point and its remaining associated marshes are all downthrown to one of the locally dominant fault segments in the Baton Rouge Fault System. This presentation stresses the role of tectonics in land loss at Goose Point. However, the general lack of geological input in land loss studies throughout coastal Louisiana is glaring. Until tectonics is integrated into land loss models, coastal restoration efforts will continue to under-perform or fail.

Biography: