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University of South Alabama Expert Tip Sheet *Gulf Oil Spill Crisis*

Panel Members

Dr. Steven Picou Professor of Sociology

Dr. Steven Picou is currently directing major research projects which focus on two of the most destructive disasters in the history of the United States. The first project is a five-year project on community recovery from Hurricane Katrina. The second project focuses on the most destructive ecological disaster in the history of the United States – The *Exxon Valdez* oil spill. This research examines the long-term social consequences of the spill and, most important, the community impacts of 20 years of adversarial litigation which resulted from the massive contamination of Prince William Sound in South Central Alaska. Picou has studied the impact of the Alaskan spill for more than two decades. Over the last year he has traveled throughout the Gulf Coast collecting data on the community impacts of the BP spill and conducting peer listener training sessions for local volunteers. For more information on Picou and his research, visit www.stevenpicou.com. *Contact Picou, (251) 460-7118 or spicou@usouthal.edu.*

Dr. Sean P. Powers Associate Professor of Marine Sciences

Dr. Sean P. Powers' research focuses on marine fisheries and near-shore oceanography. He has worked extensively with many habitats and fisheries that may be impacted by the oil spill, including oysters, blue crabs, shrimp, red fish, speckled trout, red snapper and grouper. Powers recently served as chair of the Red Snapper assessment in the Gulf of Mexico and currently serves as chair of the greater amberjack assessment panel. In addition to his research in the Gulf of Mexico, Powers has worked in Prince William Sound, Alaska, for the last 10 years on fisheries issues as well as lingering effects of the Exxon Valdez oil spill. Powers and his Fisheries Ecology Research group, based at the Dauphin Island Sea Lab, have been measuring baseline populations abundances of the key fisheries resources in coastal Alabama in an effort to facilitate damage assessment from the spill. Powers has also served as an outside expert for NOAA and other federal and state trustees in previous natural resource damage assessment cases. *Contact Powers at (251) 861-2187 or spowers@usouthal.edu.*

Dr. Sytske Kimball Professor of Meteorology Director, Center for Hurricane Intensity and Landfall Investigation

Dr. Sytske Kimball's research interests focus on hurricanes and hurricane modeling. As director of the Center for Hurricane Intensity and Landfall Investigation, Kimball has operated a network of weather stations located in the coastal and near-coastal counties of Alabama, Mississippi and the Florida Panhandle. Information collected by the weather stations is used for research, teaching and forecasting purposes. Additionally, the data is used by professionals in agriculture, hydrology, civil engineering, biology and environmental research, as well as by chemical companies. Since the weather stations monitor wind speed and direction, Kimball said they may also prove useful in determining where fumes from controlled burning of oil in the Gulf might have gone. Kimball has added Volatile Organic Compound (VOC) sensors to 10 existing weather stations in Mobile and Baldwin counties. These were installed in September 2010 shortly after the oil spill ended. Two coastal stations measured short-lived VOC spikes in October 2010, probably related to oil clean-up facilities located near the weather stations. No inland VOC concentrations were detected. *Contact Kimball at (251) 460-7031 or skimball@usouthal.edu*.

Dr. Donald R. Epley USA Distinguished Professor of Real Estate Director, Center for Real Estate Studies

Dr. Epley has been investigating the impact of the oil spill on real property value, and this has been one part of the Real Estate Center's mission, to identify the price and value of real estate by location in Coastal Alabama. This project is unique in that it is among the first to investigate standard procedures that real estate valuation experts use in disasters around the world. The results are important to individual owners and especially to the financial institutions holding real estate loans as a large part of their asset portfolio. Dr. Epley is uniquely qualified as he is one of the few individuals in the country with two professional designations in valuation and commercial investments. He is the coauthor of one textbook on the valuation of property. Further, he was elected by the valuation profession as a trustee to the Appraisal Foundation which develops federal standards and law for all states. *Contact Epley at (251) 460-6735 or depley@usouthal.edu*.

Dr. Ronald P. Kiene Professor of Marine Sciences

Dr. Ron Kiene's research focuses on chemical oceanography and marine microbial ecology. He has worked extensively on the microbial degradation of organic matter in the marine environment and the role of microbes in the production and consumption of trace gases including methane, one of the main forms of hydrocarbon introduced by the Deepwater Horizon blowout. He has extensive experience with microbial ecology and biogeochemistry of low oxygen environments (i.e. hypoxic and anoxic waters and sediments) and he is particularly interested in the development of hypoxia on the Alabama shelf, like that observed during summer and fall of 2010. Kiene and his marine Biogeochemistry Research group, based at the Dauphin Island Sea Lab, have been measuring bacterial biomass production and the concentrations of several gases (methane, oxygen, dimethylsulfide) in the water column of the Alabama shelf region regularly since June 2010. His laboratory has recently developed analytical capabilities for quantifying petroleum hydrocarbons in sediments and his group will be sampling sediments along the Alabama coast starting in April 2011. *Contact Kiene at (251)* 861-2141 x2269 or rkiene@jaguar1.usouthal.edu.

Ronald D. Franks, M.D. Vice President for Health Sciences Professor of Psychiatry

Dr. Ron Franks oversees the College of Medicine, College of Nursing, College of Allied Health Professions, and the Physician Practice Plan at the University of South Alabama. He served as Chair of the Mental Health Task Force of the Coastal Recovery Commission. He will describe the physical and mental health impact of the oil spill. Specifically, the physical health effects of the oil spill resulted in immediate death and severe burns to those on or near the platform at the time of the explosion. Subsequent to that, cleanup workers, and to a lesser extent, those populations along the coast suffered from exposure to the oil and to the fumes from burning the oil. This exposure led to skin irritation and respiratory problems in a small, but notable, number of people. Long term physical effects of the oil spill are being monitored in this population. Most apparent, however, were the mental health effects due primarily to loss of jobs associated with the oil spill. Multiple surveys revealed a doubling of the incidence of depression, substance and alcohol abuse, post traumatic stress disorder, and domestic disturbances from what would normally be seen. The psychological and emotional distress associated with the oil spill will likewise be monitored over the next five to ten years. *Contact Franks at (251) 460-7189 or rfranks@usouthal.edu.*

<u>Additional USA Oil Spill Experts</u> (attending press conference; not on panel)

Dr. Bob Shipp Professor and Chair of Marine Sciences

As senior marine scientist at the Dauphin Island Sea Lab and chair of the Gulf of Mexico Fishery Management Council, Dr. Bob Shipp is one of the region's foremost experts on local fisheries, coastal ecosystems management, and oyster reef restoration. In reaction to the recent oil spill in the Gulf of Mexico, Shipp and fellow researchers in USA's department of marine sciences ramped up sampling offshore, including reef fish monitoring, in anticipation of the disaster's possible impact. *Contact Shipp, (251)* 460-6351 or <u>rshipp@jaguar1.usouthal.edu</u>.

Dr. Semoon Chang Professor of Economics Director, USA Center of Business and Economic Research

As director of the Center of Business and Economic Research in the Mitchell College of Business at the University of South Alabama, Dr. Semoon Chang is respected as one of the leading authorities on the Gulf Coast economy. In light of the recent oil spill in the Gulf of Mexico, Chang has now begun to define the scope of potential losses the disaster may impose on local communities and the nation, including effects on the seafood and lodging industries, recreational fishing, commercial shipping, and housing and labor markets, among others. Dr. Chang has published an article titled *How to Determine BPS Compensation to Victims of the 2010 Oil Spill*, December 2010, in the Oil, Gas, & Energy Quarterly, a refereed journal by LSU. He also has important warnings for potential victims of the spill, including the danger of filing hasty legal claims. Chang has written extensively on tourism and the local economy and has published numerous economic impact studies on issues affecting Mobile, Ala., and other Gulf Coast communities. *Contact Chang at (251) 460-7388 or schang@usouthal.edu*.

Dr. Jim Connors Assistant Professor of Earth Sciences

Dr. Jim Connors is a hydrogeologist and environmental geologist who has spent more than 25 years in environmental consulting, including spill response and cleanup. Connors can give insight into some of the challenges the Gulf Coast faced as it dealt with cleanup following one of the nation's worst environmental disasters. *Contact Connors at* (251) 460-7575 or jconnors@usouthal.edu.

Dr. Miriam Fearn Chair, Earth Sciences

Dr. Miriam Fearn has been involved with Dog River Clearwater Revival, a grassroots group dedicated to improving water quality in Dog River, for more than 10 years. In response to the Deep Water Horizon oil spill, Fearn and the Dog River environmental group were involved in doing pre-impact trash removal, photo documenting conditions that existed in the river, and offered insight into the best locations for booms to protect the river. Fearn also teaches a senior-level geography class that examines issues with the Dog River Watershed. *Contact Fearn at (251) 460-7573 or mfearn@usouthal.edu*.

Elise Labbé-Coldsmith Professor of Psychology Director, USA Psychological Clinic

According to University of South Alabama psychologist Dr. Elise Labbé-Coldsmith, the USA Psychological Clinic and the Combined Clinical Counseling Psychology program at the University are well positioned to help in the recovery process of the BP oil disaster

which has impacted Gulf Coast communities. USA's clinic and Combined Clinical Counseling Psychology program were poised to respond to immediate human concerns that developed very quickly in response to the economic, environmental, social and psychological impact of the oil spill. Out of concern for the Gulf Coast community, USA psychologists are an active part of the recovery team. *Contact Labbé-Coldsmith at (251) 460-7149 or elabbe@usouthal.edu*.

Dr. Mohammad Alam Professor and Chair, Department of Electrical and Computer Engineering

Dr. Alam is an expert on image processing, pattern recognition and tracking. He is primarily interested in the application of hyperspectral and multispectral imaging techniques to estimate the impact of oil spill or oil-derived substances on the surface, subsurface and other areas of interest in the Gulf of Mexico. Using satellite imagery, one can investigate a large area of interest without physically coming in contact with the actual region. *Contact Alam at (251) 460-6117 or malam@usouthal.edu*.

Dr. Scott Douglass Professor of Civil Engineering Director, Coastal Transportation Engineering Research and Education Center

As one of the nation's foremost experts on beaches and coastal engineering, Dr. Scott Douglass' research interests include wave mechanics and sand transport, beach erosion solutions, and design of built infrastructure along the coast. A coastal engineering researcher who has examined Dauphin Island's erosion problems for more than two decades, Douglass helped the island with beach-related decisions in the wake of the Gulf oil spill. He can explain efforts taken to protect the barrier island and estuary in the wake of the disaster. *Contact Douglass at (251) 510-2903 or sdouglass@usouthal.edu*.

Dr. Alice Ortmann Assistant Professor of Marine Sciences

Dr. Alice Ortmann's research focuses on microbial processes in the oceans, specifically how the diversity and activities of microbes (bacteria, archaea and viruses) influence larger ecosystem processes. Because some microbial groups are capable of degrading the oil and producing food for other microbes, microbes could be a link between the organic matter in oil and higher trophic levels. Dr. Ortmann's group has been carrying out experiments to determine if the oil has affected the growth and transfer of carbon to larger organisms, as well as how the oil may have affected the diversity of the microbial communities. *Contact Ortmann at (215) 861-2141 ext. 7526 or aortmann@usouthal.edu.*

Dr. Kyeong Park Associate Professor of Marine Sciences

Dr. Kyeong Park's research focuses on water movement (physical transport) and its effects on water quality (hypoxia, eutrophication, etc.) and living resources (larval transport, etc.) in tidal rivers, estuaries, and coastal waters. Park has been working on observational and numerical modeling study of the Alabama coastal water. In regard to oil spill, he has focused on: 1) hydrographic and flow characteristics on the coastal shelf outside of Mobile Bay; 2) exchange processes between the northern Gulf of Mexico and Mobile Bay; and 3) along-ship channel transport inside Mobile Bay, the northern Gulf of Mexico. *Contact Park at (251) 861-2141 x7563 or kpark@jaguar1.usouthal.edu*.

Dr. Greg Waselkov Archaeologist, Professor of Anthropology

As Director of the USA Center for Archaeological Studies with more than 30 years of research experience in the region, Dr. Greg Waselkov is one of the foremost experts on Gulf Coast archaeology. In response to the recent oil spill, Waselkov and fellow archaeologists at the Center initiated an ongoing systematic search for prehistoric and historic sites along Alabama's coastal waters, the first such survey in 75 years. By finding and documenting the condition of archaeological sites along the coast, the state will be better able to protect vulnerable cultural resources, to evaluate the impact of this spill, and to plan for mitigation of future disasters, whether natural or otherwise. *Contact Waselkov at (251) 460-6911 or gwaselkov@jaguar1.usouthal.edu*.

Jennifer Langhinrichsen-Rohling Professor of Psychology

Dr. Langhinrichsen-Rohling is a clinical psychologist who has been studying stress responses including suicidal behavior, post-traumatic stress disorder (PTSD), and youth violence and delinquency for the past 20 years. Dr. Langhinrichsen-Rohling is currently partnering with the Alabama Department of Mental Health on a SAMSHA emergency grant to improve our mental health surveillance infrastructure, and she is working with local agencies who are providing therapeutic services to Alabama youth and families who have been impacted by the oil spill. Dr. Langhinrichsen-Rohling also participated on the mental health subgroup of the Governor's Coastal Resiliency Council. As a core member of the Combined Clinical Counseling Doctoral program, Dr. Langhinrichsen-Rohling teaches courses on resiliency to trauma and prevention of mental health disorders. *Contact Langhinrichsen-Rohling at (251) 460-7069 or jlr@usouthal.edu*.