

LOUISIANA CIVIL ENGINEER

Journal of the Louisiana Section

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ACADIANA • BATON ROUGE • NEW ORLEANS • SHREVEPORT

FEATURE:

Application of Underwater
Acoustic Imaging &
Profiling: Underwater
Substructure Inspection &
Spatial Element Mapping

NEWS:

Integration Of Hurricane
Flood Protection & Coastal
Restoration: A Louisiana
Perspective

Section Awards

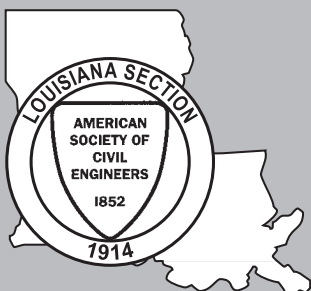
ANNOUNCEMENTS:

Engineer's Week
February 15-21, 2009

Deep South Student
Conference:
Arkansas State University
March 26-28, 2009



Ali M. Mustapha, PE
President



NOVEMBER 2008
VOLUME 17 • NO 1

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BATON ROUGE, LOUISIANA



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OWNER: Brightside Estates Condominiums, Baton Rouge, LA

PROJECT MANAGER: Searay Construction, Kenner, LA

ENGINEERING: Evans-Graves Engineers, Baton Rouge, LA

GEOTECHNICAL: Gautreau & Gonzales, Baton Rouge, LA

CONTRACTOR: Chambers Construction, Baton Rouge, LA

PROJECT DESCRIPTION

The project combines The WASKEY Bridge™ with bolt-on barriers, a pedestrian walkway, and four REDI-ROCK® wingwalls, all manufactured by WASKEY™. The bridge capsills are extended to support the pedestrian walkway on one side and utilities on the other. The bridge roadway is skewed 60° to accomplish an angled water-crossing and is crowned to facilitate runoff.

TECHNICAL DETAILS

Clear Roadway: 24'
Spans: 5 spans (3-19' and 2-11')
Piles: 14" Prestressed Concrete
Overall Length: 79'
Deck Thickness: 10" + 2" Crown
Piles per Bent: 4

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LOUISIANA CIVIL ENGINEER

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E.R. DesOrmeaux, PE

The Louisiana Section is located in ASCE Region 5 that consists of the Louisiana, Mississippi, Alabama, Georgia and Florida Sections.

President's Message

By Ali M. Mustapha, PE

It is an honor and a privilege to be elected to serve as President of the Louisiana section of ASCE. I am looking forward to serving the section members and the Civil Engineering Profession. With the help of the section Board Members, a group of dedicated and professional leaders, and the four Branches' officers, we can build on the success and accomplishments that were achieved last year under the leadership of E.R. Des Ormeaux.

I had the honor of meeting Mr. DesOrmeaux, or as he likes to be called E. Ray, five years ago when I was elected to finish the term of at Large Director who resigned from the Section's Board. It did not take me long to realize that E. Ray is an ASCE Pioneer who has the interest of the civil engineering profession at heart and is a very dedicated leader serving our members, ASCE and the Profession. Also he quickly became a monitor to all of us. Finishing his term as the Section President is not the end of his service to the Section, but is the beginning since he has accepted the nomination to represent the Section as Governor on the Region 5 Board. E. Ray is replacing Dr. Norma Jean Mattei as Governor after she was elected in August to serve as the Region 5 Director on the ASCE's Board of Direction. Congratulations to Dr. Mattei on her election to this position on ASCE's Board. She assumed her new position as Chair of Region 5 Board of Governors October 1, 2008. The Section is very fortunate to have E. Ray and Dr. Mattei, two dedicated professionals and leaders, represent our members at the Regional and National Levels.

The 2008 Annual Section Awards and Officers Installation meeting was held at a luncheon at the University Club in Shreveport on September 19. This marks the start of a new tradition in the history of the Section. Future Annual Awards and Officers Installation Meetings will be held at the home Branch of the upcoming Section President.

The 2008-2009 Section Officers were installed by Dr. Bobby E. Price, Ph. D., PE, Past Section President, Past President of NSPE, and ASCE Honorary Member. Christopher Knotts, President Elect presented the Section Awards to the recipients. Eleven awards were presented to a group of outstanding Civil Engineers and leaders in our profession from the four society branches. Congratulations to all the recipients and thank you for your dedication and contributions to ASCE, the Civil Engineering Community and the welfare of mankind.

You may have noticed that the Section's Journal has a new look with a different format and content. Jim Porter, ASCE Pioneer, Past Section President, the Journal Editor for fourteen years decided it is time to retire as the Journal's Editor. Jim has been instrumental in publishing the Section's award winning

Journal and his contributions and service to ASCE, the Civil Engineering Profession, have touched not only all Civil Engineers but Engineers of all disciplines in the state. Also Jim was the Section's Webmaster and he invested 100's of hours designing the Section's web site that earned the best ASCE Web Site Award among large sections in January 2008. On behalf of the Section and its members thank you Jim for your dedication and service to ASCE, the Section, and the Civil Engineering Profession.

Ms. Nedra Davis of Baton Rouge was retained by the Section Board in August as the Journal's Editor. Kudos to Christopher Knotts, President Elect and the Publication Committee Chair for working with Nedra Davis and Jim Porter on the transition to insure our quality and award winning Journal will be published and delivered to the membership on time. Nedra has worked very hard on creating a new design and format to improve the Journal. I would like to encourage all the Branches Officers and the Section members to contribute to the success of the Journal by writing articles for publication, reporting Branches and member's news, placing a business advertisement or writing an editorial.

The purpose of the Section and the Journal is to provide an avenue for our members to express their views, report and share information, recognize accomplishments, promote our profession, advertise services and publish research papers. It is very important for our members to utilize this awards winning journal to advance the Civil Engineering Profession.

Communication between the Section's leadership, the four branches leaders, student chapters, our members (the grass roots of ASCE) and other professional and technical societies is vital to the growth, success and strength of the society. It is the responsibility of every member to be visible, step forward and be heard at all times to insure that the stature of the civil engineering profession continues to improve and does not become a stealth profession. Let's work together to promote, protect and advance our profession.



Ali M. Mustapha, PE

Past President's Forum

By E. R. DesOrmeaux, PE

With this issue of the Louisiana Civil Engineer journal, the Past Presidents Forum is introduced as a new editorial feature. With each succeeding issue, Past Presidents of the Section are invited to address any item relating to the profession.

And, with this edition, the Journal introduces a new Editor, Nedra Davis. With a number of options available to the LA Section in addressing the needs of the future of the Journal, Ms. Davis was selected by the Section Board to be the Editor of the Journal. A resident of Baton Rouge, and has undertaken this new "venture" with great enthusiasm. In reading the Journal, it will be observed that a number of changes have been instituted. Under the direction of the Publications Committee, chaired by President-Elect Christopher Knotts, Ms. Davis requested several "design" changes, and has worked diligently insuring that all features of the Journal were quality based and related to the profession.

Necessity dictates that as the most recent Past President that I thank Jim Porter on behalf of all Louisiana ASCE Members for the outstanding effort he put forth for fifteen years as Editor of the Journal. However, with a significant amount of gratitude we express how important Jim was to all of us in single-handily managing every aspect of the production of the Journal.

Every Section Officer for many years can attest to Jim's relentless dedication in providing a Journal, issue after issue, of the highest quality. Our national society recognized the quality of the Journal and awarded the Section with its "Outstanding Section Journal Award".

Jim Porter..."THANK YOU"

The initial article of the "President's Message" in the November 2007 issue of the Journal contained our goals for the Section Year. As suspected, not all goals were successfully achieved. However, keeping with the premise of "change the timetable, not the goals", several of the initiatives originally mentioned continue. The incoming leadership of the Section is outstanding, and Louisiana civil engineers can look forward to representation by individuals with energy and dedication to the profession.

The Section and its Branches are in good financial condition. Again, each Branch is encouraged to return to its members value in some form, be it opportunities to meet continuing educational requirements, increasing scholarships to our Student Chapters, and for attendance at various ASCE national conferences, which include leadership training, outstanding technical presentations, etc.

This year, because of increased costs related to the Journal, it will be necessary to increase Journal revenues through increased advertisements. The Section officers fully support the continued publication of the Journal, recognizing the need for a continued means of commu-

nications with its members. The Louisiana Civil Engineer journal, the LA website, and the Branch newsletters will continue to keep our membership informed of activities within the state relating to civil engineering.

The Deep South Student Conference is scheduled for March 26 -28, 2009 at Arkansas State University. The LA ASCE Student Chapters have been well represented in past years, and have an admirable record in the various competitions at both regional and national level. These student chapters need Branch and member support, and thus each of you are encouraged to become involved by contacting the faculty advisor and/or the Branch contact and offer your help.

The ASCE Body of Knowledge (BOK) and Proposition 465 are the "hot ticket" items being addressed on both a state and national scale. This year, significant efforts were made to educate all civil engineers in Louisiana about the BOK. Forums were held respectively at both the Spring and Fall Conferences in Lafayette and New Orleans. Additionally, meetings were arranged with the civil engineering faculties at all state universities, and we had the privilege of having a number of the LAPELS Board attend several special sessions allowing each of them to gain an appreciation and understanding of the issues and the process. I am indeed proud that Louisiana has taken a leadership position in bringing the issue of the future education of civil engineers to its membership. Progress will be made only through awareness and understanding of the complex issues involved in the vision of the engineer of the future.

I began my term by thanking the Section members for allowing me to serve, and again repeat the same message. It was a privilege to serve as Section President, and I will continue to serve ASCE by being involved as a member in any activity that advances the profession and the Society.



E. R. (Ray) DesOrmeaux, PE

Region 5 Governor

By E. R. DesOrmeaux, PE

A new feature of the Louisiana Civil Engineer journal is the inclusion of news of the Region 5 in which Louisiana is a member. In ASCE, a number of "Regions" are established, and the Louisiana Section is part of Region 5, which also includes the states of Mississippi, Alabama, Georgia, and Florida.

This month's article is intended only to inform the LA ASCE membership on how the Region 5 functions. In subsequent articles, the activities of the Region will be reported to the membership.

There is at least one (1) representative from each state, and the representatives are known as Governors. For the past several years, the Director of the Region was Kathy Caldwell, PE, a Florida member. Her term has been completed, and Dr. Norma Jean Mattei, was elected by member ballot to be the Region Director. I have been nominated and elected to serve the unexpired term of Dr. Mattei.

The By-Laws of the Region state:

1. "The purposes and objectives of the Region 5 Board of Governors shall be to support and facilitate the professional and technical development of Society members residing within the boundaries of Region 5, to promote and support Society Organizational Entities operating within the boundaries of Region 5, and assist on a regional basis the Society Board of Direction in governing the Society."

2. "The Region 5 Board of Governors shall provide advice to the Society Board of Direction, the Region 5 Sections, and the Society Organizational Entities within Region 5."

Meetings of the Region 5 Board occur in two (2) ways...by teleconference calls on a scheduled basis, by attendance at national ASCE meetings, and other venues, such as the LA Fall Conference in New Orleans on October 7, 2008.

Meet the New Editor

By Nedra Sue Davis, MA

I hail from Corpus Christi, TX, originally but have called Louisiana home since 1980. I received my MA in cultural anthropology in 1997 from Louisiana State University. I am excited to announce my new position as Manager for the Communication & Training Section of LACES at the Office of Coastal Protection and Restoration.

My prior experience includes working eleven years as a Research Associate in the College of Engineering at LSU. I was a Research Associate in the Louisiana Water Resources Research Institute and the Hazardous Substance Research Center. During this time I also worked for the LSU Hurricane Center, LSU's Center for GeoInformatics and the LSU Hurricane Public Health Center.

My list of activities also includes my duties on Forum35's Executive Board, where I am finishing my term as Vice President of Development and starting my new term as Vice President of Corporate Membership. I am very much a multitasker and it's second nature to be involved professionally and personally in my community. In addition to those roles I take on – I have a six-year old little boy, Janus, and enjoy going to church, running in Happy's Running Club, and reading in my spare time.

From 2002 until 2005, I assisted the American Society of Mechanical Engineers JERT Editor, who was responsible for editing articles and the review process of this refereed journal. I have also maintained several websites for both LSU and private organizations. My primary expertise is in program and conference organization and coordination, GIS management and Web page development. My research interests include hurricane protection and restoration. I also independently consult dealing with GIS, standard operating procedures development, and safety/emergency procedures manuals development for industry.

I have a heartfelt desire to give back to the community by fostering and supporting programs and organizations that improve the quality of life for Louisianans. I believe the American Society of Civil Engineers'



Nedra Sue Davis, MA

Louisiana Section does just that with its programs and journal. My definition of success is the stewardship of our journal towards a new direction and is something that I'd like to think is more process-oriented concerning the impending changes for the Louisiana Civil Engineer. As for keeping things relevant and sustainable, we are trying to focus on content that is both timeless and content that is fresh and topical. This allows all members to get something out of the Louisiana Civil Engineer each issue, and we are trying to live up to our tradition of being an award winning journal.

Plans are underway for a number of enhancements to the journals, some of which have already begun in the design realm. The ASCE Louisiana Section Publications Committee, under the direction of President Elect and Chair, Christopher Knotts, PE and I are selecting papers of more general interest, and highlighting those that we think are especially helpful and encouraging for readers venturing outside of their main areas. Given the Louisiana Civil Engineer's legacy, it's a tremendous responsibility that I hope I live up to in my own small way. I would really like to thank the Section Board and Bob Jacobson for giving me this tremendous opportunity. I would like to encourage our readership to email me their ideas and interests, we are here to make sure that the journal stays its course and hopefully exceeds the member's expectations. Please email article suggestions, questions, or comments to: Nedra Davis at nedrasue-davis@gmail.com.

Application of Underwater Acoustic Imaging & Profiling: *Underwater Substructure Inspection & Spatial Element Mapping*

By Kenneth J. LaBry

The inspection of underwater structural components of infrastructure such as bridges, dams, locks, flood-gates, and other water control structures is crucial if such infrastructure components are to maintain adequate performance throughout their life cycle and attain the maximum length of life cycle. The technology to perform such inspections, until recently was limited to the use of divers and robotic vehicles that perform largely visual and tactile surveys of the infrastructures. This is problematic under inclement environmental conditions such as high current flow, extensive structural surfaces, and low to no visibility. Due to the significant impact of these environmental conditions on results and findings, these surveys tend to be extremely subjective and provide only very generalized comparison information from successive surveys. These typical cursory surveys cannot be used to establish a baseline control of infrastructure condition due to the limited information that is provided.

With the advent of the development of underwater acoustic, steered beam sonar and profiling, remote sensing systems that have the ability to produce high definition sonar imagery, as well as precise acoustic profile measurements, there is now a cost effective alternative to conventional methods of underwater substructure inspections. This alternative can provide a control baseline for future surveys, as well as a non-subjective data set, that can be used to compare to previously recorded structure baseline conditions. This methodology can also be used to provide a comprehensive spatial element map of underwater structure surfaces and their interface with the water bottom.

Underwater acoustic imaging and measurement systems contain an emitter and a receiver, which rely on the emission of a sound wave and the measurements of the time required for a reflection of the emitted sound pulse to return to the receiver, as well as the measurement of the intensity or amplitude of the reflected sound pulse. In many systems, the emitter and receiver are the same physical sensor or transducer. The physical characteristics of the acoustic pulse wave are critical to the resolution of the sonar imagery and the precision of the acoustic measurement. The main critical physical characteristics include the frequency of the acoustic wave form, the pulse length of the acoustic transmission, and the beam width of the acoustic wave form. Generally speaking, the

higher the frequency, the greater the resolution. This also indicates, however, that the effective range becomes significantly shorter. In addition, a shorter pulse length produces higher definition but becomes compromised by this shortened range effectiveness. A narrower beam width also produces higher definition but reaches a trade off limit with scan coverage requirements, restricting the speed of the transducer movement or the scan speed. The beam width characteristics are controlled by the physical characteristics of the transducer, reaching a point where transducer construction becomes problematic. Consequently, the best compromise to optimize the physical beam forming characteristics are a fairly high frequency in the range



Kenneth J. LaBry

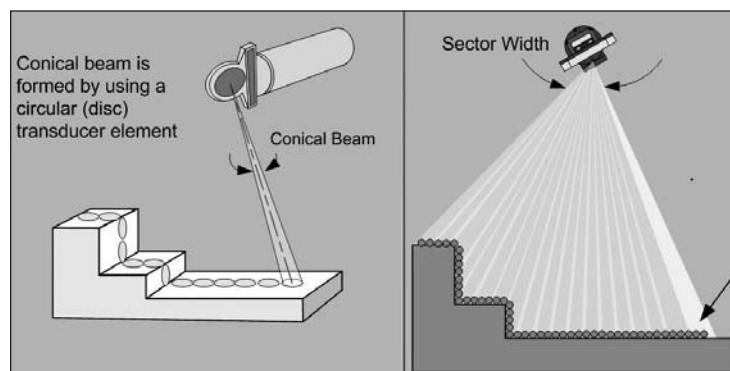


Figure 2.

between 500kHz and 900kHz, a horizontal beam width of less than 1° , and the shortest pulse length that can effectively produce the desired detection range. For acoustic profiling measurement, the smallest practical acoustic footprint for the beam produces the greatest range measurement accuracy and reduces the noise from multi-path reflections due to nearby structural components.

The configuration of the instrumentation that is utilized in the Fenstermaker process is a dual element, fan beam/conical beam, 360° mechanically scanned, imaging and profiling sonar. The system operates at a frequency above 500 kHz and is configured for a horizontal beam width of less than 1° and a conical beam of less than 2° . The system is also configured for beam steerability in both the horizontal and vertical planes with redundant steerability in one of the axes. This redundancy axis is defined by the operator.

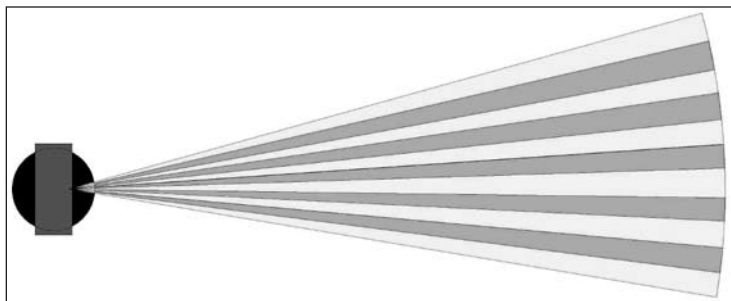


Figure 1.

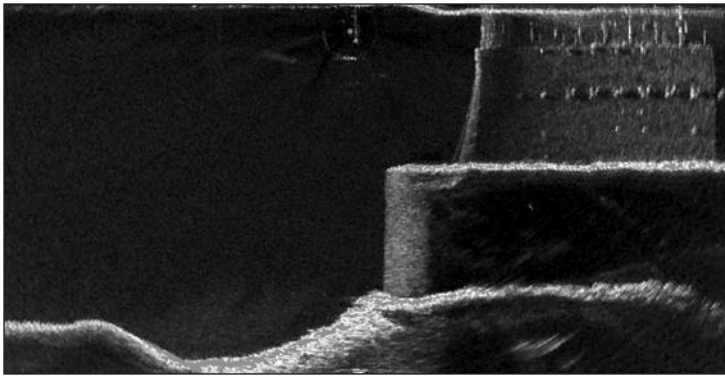


Figure 3. Visualization of the longitudinal pier alignment plane, Huey P. Long Bridge in New Orleans, LA

The inspection of underwater structural components with high definition acoustic imaging techniques requires significant considerations in the deployment methodology. The sensor must be maintained in a stable position during the scan segment and the sensor orientation must be such that the grazing angle of the acoustic beam across the structure surface provides for visualization of surface undulations, projections, and abnormalities in the plane of observation. Because of this aspect of the methodology, most scenarios will require the ability to vary the sensor orientation in order to remain normal to a specific observational plane corresponding to a structure surface.

The deployment methodology can be problematic in environments where high water currents or close proximity heavy shipping traffic exists. Fenstermaker has overcome these problems by designing and constructing several self contained deployment mechanisms that are portable and can be quickly deployed.



Figure 5 – Fenstermaker's self-contained LARS (Launch & Recovery Systems)

The quantitative measurement of profiles of structural abnormalities and the interface between the substructure and the water bottom requires the use of steered-beam profiling. By utilizing dual axis steerability, quantitative measurement data can be gathered over areas where abnormalities were observed, utilizing underwater acoustic imaging. The steered-beam profiling, with a narrow conical beam, provides for acoustic measurement accuracies of 0.1" at ranges of 75' on absolute acoustic boundaries and provides the capability to collect profile measurements between narrowly-spaced, structural members.



Figure 4 - Bridge Pier Fender Damage assessment

The steered-beam profiling methodology is also utilized to generate water bottom elevation models to evaluate scour and deposition, as well as map water bottom erosion patterns.

The profiling methodology involves the incorporation of a high precision, Motion Reference unit, a heading reference sensor to orient the acoustic remote sensing device and Real Time Kinematic GPS, which provides centimeter accuracy for geo-referencing of the acoustic data. The use of instrumentation to determine the speed of propagation of the sound wave in the water column is also necessary to maintain a high degree of accuracy in the acoustic measurement. This is accomplished by the utilization of a velocimeter profile sensor, which determines and records the speed of sound in the water column at varying depth intervals as specified by the operator. The speed of sound varies with fluid density, which is affected by turbidity and salinity. Temperature and pressure also affect the propagation velocity.

The example shown in Figure 7 is a result of data rendering from a survey performed for a Louisiana Department of Transportation and Development project at D'Arbonne Dam in Union Parish, Louisiana. In this case, Terrestrial Lidar (HDS) Laser Scanning was utilized to scan the superstructure of the dam and surrounding environment. Fenstermaker's Underwater Acoustic System was also used to scan the submerged structural components of the dam, as well as the water bottom upstream and downstream of the concrete spillway structure. The data sets were then integrated to construct a comprehensive "as-found" 3D model of the dam system from which geographic position and metrology can be extracted. This provided a comprehensive baseline, assisted in identifying areas of concern that were in need of repair or remediation, and provided volumetric and measurement data for determining extents of repair and material needs.

The resulting model, identified the complex erosion pattern and scour characteristics downstream, as well as provided data to qualify any differential movement in the spillway apron slabs and the concrete dam structure. The survey also defined possible problematic characteristics at the toe of the concrete structure on the reservoir side of the dam that potentially indicated a piping condition. This prompted a recommendation for a more intensive diver-aided investigation, which was undertaken at a later date. When the diver-aided investigation occurred, approximately 60 days later, a dynamic situation was observed through which the depressions in the silt at the toe of the structure that were of con-

cern were considerably larger and had grown together. The Acoustic Imaging system was utilized to guide a pipe probe into the depression, injecting dye to define any significant flow prior to sending a diver into the environment. Flow was not observed, however, the dye did not pool either. Upon close inspection by divers, the hole in the sediment was caused by a compromised joint and seal at the base of the structure, allowing water and sediment to be transported through the structure and into the drainage system. This case study shows the multi-faceted role of the acoustic remote sensing system, utilized to map and identify problems, assist in defining a safe working environment, and finally assist in expediently directing diving efforts to problem sites in conditions of low to no visibility.

Utilizing underwater acoustic imaging and underwater acoustic profiling in conjunction allows for the qualification and quantification of structural and water bottom abnormalities in a cost effective manner. The production rate of area covered relative to other methods provides for a significant cost savings and provides a much more extensive and non-subjective data set that can be used for subsequent comparative analysis with future surveys performed in the same manner. The geo-referencing of all acoustic data provides for real world displacement measurement along the water bottom and structural surfaces.

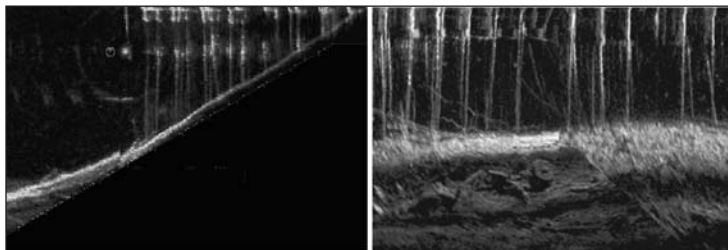


Figure 6 – Under Wharf Visualization

Another example of the effectiveness of this methodology is the case study of the survey performed on the Huey P. Long Bridge over the Mississippi river in New Orleans, Louisiana. This survey was performed for the first time by Fenstermaker in April of 2006 prior to commencement of a major construction project to expand the bridge. Fenstermaker was engaged to perform an acoustic imaging inspection of the underwater substructure component of the piers, which comprised a total surface area of 78,983 square feet. This survey was completed in five days of field data acquisition with two days for mobilization and de-mobilization. The water current in the river during the survey was 2.3 to 2.7 kts. This effect was magnified when coupled with the close proximity of shipping traffic causing surge in the water column. The amount of turbidity in the water column also generated a condition of zero visibility under water. The combination of these factors created not only an extremely difficult situation for divers but also an unsafe working

environment. This project was completed 17% under budget and on time.

While this example may be an extreme case, it does demonstrate the effectiveness of this methodology in adverse conditions, as well as the cost savings from increased production of surface inspected and the capability of operating without having to alter other commercial operations such as shipping.



Figure 7 - Underwater Acoustic Imagery and spot profile elevations extracted from 3D model of integrated Underwater Acoustic Imaging and Profiling data and HDS Laser Scanning Data



Figure 8. Visualization of the longitudinal pier alignment plane, Huey P. Long Bridge in New Orleans, LA

Kenneth LaBry is a Physicist with over twenty years of experience in Underwater Acoustics Remote Sensing, having directed and performed underwater inspections and mapping for oil and gas production facilities and exploration sites in the Gulf of Mexico, other offshore oil and gas theaters of operation, as well as having directed underwater inspections of significant bridge, dam and water control structures. He is the recipient of the 2007 Louisiana Transportation Excellence Award for Use of an Innovative Product or Technology and the 2006 Society of American Military Engineers Technology Advancement Medal. He is a member of ASCE, The Hydrographic Society of America, The Society of American Military Engineers, The Association of State Dam Safety Officials, and the Marine Technology Society.

Section News and Information

2008 ASCE Louisiana Section Officers Installation Luncheon and Section Awards

The Shreveport Branch hosted the 2008 ASCE Louisiana Section Awards and Officers Installation Luncheon on September 19, 2008 at the University Club. Shreveport Branch President Todd Henry called the meeting to order and welcomed everyone to Shreveport. Incoming President, Ali Mustapha served as the Master of Ceremonies and introduced Patrick Landry who led the Invocation. Mustapha then asked President E. Ray DesOrmeaux to come up and provide opening remarks. President DesOrmeaux introduced all of the Section Board, discussed his view of the ASCE Vision 2025, the Body of Knowledge and what those initiatives mean to the future of the Civil Engineering profession. He also shared with those present his philosophy of giving the ASCE members' money back to them through local programs such as PDH presentations of value to the Branch membership. DesOrmeaux then discussed the changes that the Louisiana Civil Engineer journal will be going through with the "retirement" of Jim Porter as the editor. He asked each Branch to strive for vendor and supplier advertisements in the journal to insure that we can continue the tradition of quality that Mr. Porter provided for 14 years.

Mustapha then asked Christopher Knotts, the Section's Award Committee Chair to present the 2008 Section Awards. Those receiving awards were:

- Elba U. Hamilton, EI**
Outstanding Young Civil Engineer
- Leslie K. Guice, PhD, PE**
Outstanding Civil Engineer
- Rudolph A. Simoneaux, EI**
Outstanding Young Government Civil Engineer
- Kim M. Garlington, PE**
Outstanding Government Civil Engineer
- Allison "Sonny" Launey, PE**
Outreach Award
- George Z. Voyiadjis, PhD**
Educator of the Year
- Gordon P. Boutwell, PhD, PE**
Lifetime Achievement Award

William W. Gwyn, PE
Lifetime Achievement Award

C. Carter Brown, PE
Wall of Fame

Thomas L. Jackson, PE
Wall of Fame

Jerry G. Lazenby, PE
Wall of Fame

President DesOrmeaux returned to the podium to present his President's Medal to Christopher Knotts.

Mustapha then requested Dr. Bobby E. Price to install the Louisiana Section's officers. The 2008-09 Section Board is:

Ali M. Mustapha, PE
President

Christopher P. Knotts, PE
President-Elect

Patrick J. Landry, PE
Vice President

Ronald L. Schumann, PE
Secretary-Treasurer

E. R. DesOrmeaux, PE
Past President

The 2008-09 directors are Dax A. Douet, PE, Jeffrey L. Duplantis, PE, Charles E. Hudson, PE, Christopher G. Humpreys, PE, Luke E. LeBas, PE. The Section's four Branch presidents also sit on the Board as directors. They are Clint S. McDowell, PE, Acadiana; William H. Wall, PE, Baton Rouge; Nathan J. Junius, PE, New Orleans, and Todd Henry, PE, Shreveport.

The meeting concluded with outgoing President DesOrmeaux presenting 2008-09 President Mustapha with his President's Plaque. This was a very enjoyable event and the first where the home Branch of the incoming president hosted the ceremony. This idea stemmed from the Section's leadership to encourage more of our membership to take the opportunity to attend a Section Officers Installation meeting.



President
Ali M. Mustapha, PE



President-Elect
Christopher P. Knotts, PE



Vice President
Patrick J. Landry, PE



Secretary-Treasurer
Ronald L. Schumann, Jr., PE

2008-2009 Section Board Officers



*Past President
E.R. DesOrmeaux, PE*



Director, Clint S. McDowell, PE



Director, Christopher L. Sanchez, PE



Director, Todd Henry, PE



Director, Dax A. Douet, PE



Director, Christopher G. Humphreys, PE



Director, William Wall, PE



Director, Luke E. LeBas, PE



Director, C. Eric Hudson, PE



Director, Nathan J. Junius, PE



Director, Jeffrey L. Duplantis, PE

2008-2009 Section Awards



Ali M. Mustapha, PE
President's Plaque



Allison "Sonny" Launey, PE
Outreach Award



Christopher P. Knotts, PE
President's Medal



Leslie K. Guice, PhD, PE
Outstanding Civil Engineer



Elba U. Hamilton, EI
Outstanding Young Civil Engineer



Jerry G. Lazenby, PE
Wall of Fame



Kim M. Garlington, PE
Outstanding Government Civil Engineer



Rudolph A. "Rudy" Simoneaux, EI
Outstanding Young Government Civil Engineer

Integration of Hurricane Flood Protection & Coastal Restoration: A Louisiana Perspective

By Garret Graves, Governor's Executive Assistant for Coastal Activities

Coastal lands and wetlands serve as an important buffer for hurricane protection levees and other flood protection infrastructure. Coastal forests and wetlands temper storm surge and reserve flood waters. The integration of coastal restoration projects with structural and nonstructural hurricane protection features is vital to the goal of safe and sustainable coastal communities.

2005 Storm Season, an Impetus for Change

In 2005 Hurricanes Katrina and Rita resulted in the loss of 1,464 lives in Louisiana, displacement of hundreds of thousands more, spikes in oil and gas prices across the nation, and the loss of 217 square miles of land in Louisiana's coastal area. Property damage was widespread and fishing, agriculture, and other important Louisiana industries suffered. In the aftermath, the importance of Louisiana was made clear to the nation, if only for a brief while, as the federal government reacted, spending tens of billions of dollars responding to the assault of the 2005 storm season: a fraction of that investment in proactive initiatives would have prevented over 80 percent of the loss of life and damages associated with Hurricanes Katrina and Rita.

Following Hurricane Rita, discussions ensued in earnest on the best way to integrate the State's hurricane, flood protection, and coastal restoration efforts. Before that time the Louisiana Departments of Natural Resources (DNR) and Transportation and Development (DOTD) were separately responsible for coastal restoration projects and programs and hurricane and flood protection efforts. The processes in each Department to address the issues were not only independent of each other but were, in fact, very different in approach. DNR's Office of Coastal Restoration & Management, comprised of approximately 150 employees, was actively involved in all phases of restoration projects and included professionals in the areas of coastal management, engineering and design, planning, land rights investigations, and biological monitoring. Hurricane and Flood Protection was handled through the DOTD's Office of Public Works. Since the vast majority of hurricane and flood protection work was federally funded and the Corps of Engineers led the planning, design and construction efforts, this office had been forced to play a much more passive role in the flood protection process. Various levee districts in the state also served as local hurricane protection project representatives. This disparity of approaches led to very different abilities to respond to our respective missions post-storms.

In November 2005, Act 8 passed during the First Extraordinary Session of the Louisiana Legislature establishing a single entity, the Coastal Protection and Restoration Authority (CPRA). The legisla-

tion mandated integration of hurricane protection and coastal restoration for the first time in Louisiana's history, and gave CPRA the power, duty and specific responsibility to provide the state with comprehensive coastal protection. Members include representatives from the governor's office, many state agencies, coastal parishes and levee districts. CPRA works with various governmental and political entities including the Louisiana Recovery Authority, the Governor's Advisory Commission on Coastal Protection and Restoration and the state Legislature.

A Comprehensive Master Plan for a Sustainable Louisiana Coast

As a parallel effort to the legislative undertaking to coalesce coastal restoration and flood protection, the director of the Governor's Office of Coastal Activities and the Secretaries of Departments of Natural Resources and Transportation organized a leadership team from the aforementioned Offices of Coastal Restoration and Management and Public Works to develop a comprehensive coastal protection plan. The document, Integrated Ecosystem Restoration and Hurricane Protection: Louisiana's Comprehensive Master Plan for a Sustainable Louisiana Coast was completed and submitted to the Legislature for approval in April of 2007. The goal was to integrate key coastal restoration and hurricane protection projects together under one bound cover, replete with the consensus of coastal communities, and public and private coastal users from all across the state of Louisiana.

The plan calls for hurricane protection of coastal communities and integrated efforts to mimic the natural land-building processes of the lower Mississippi River system by constructing river diversions, pumping sediment into our coastal areas and restoration of our barrier islands. The plan identifies those barrier islands, sections of shoreline, and natural ridges, including cheniers,—the natural barriers for storm surge—that are in critical need of repair or replenishment. The plan discusses how the coastal parishes can improve building codes and zoning ordinances to complement the total storm protection level provided to our coastal residents, encouraging communities on our coast to build stronger and smarter. The plan also calls on the U.S. Army Corps of Engineers to beneficially use material dredged from the state's navigation channels like the Mississippi River, Atchafalaya River and others for coastal restoration. (NOTE: The Corps spends nearly \$200 million annually dredging navigation channels in Louisiana. Nearly all of the sediment dredged from the rivers is dumped into the deep waters of the Gulf of Mexico rather than used to nourish and restore our coastal wetlands.) The Master Plan has already received top honors from the U.S. Environmental Protection Agency, National Association of

Environmental Professionals, American Shore and Beach Preservation Association and others.

The state of Louisiana's master plan for comprehensive coastal restoration and hurricane protection will cost between \$60 billion and \$150 billion to fully implement. This effort will be carried out jointly among federal agencies, the State of Louisiana and local governments.

A New Administration and Continuing Management Improvements

Within the first few months in office, newly elected Governor Bobby Jindal integrated the disparate activities of at least four agencies into one integrated organization responsible for the restoration and protection of coastal Louisiana. This integration will improve the efficiency of the state's restoration and protection efforts and improve coordination with the various federal agencies working in coastal Louisiana. One of the first executive orders issued by Governor Jindal made the most significant improvement in the management of Louisiana's coast in history. The order requires that all state activities are consistent with the state's coastal master plan for coastal restoration and hurricane protection. This action ensures that the protection and restoration of the coast, the resilience of our coastal communities, and the sustainability of both our coast and communities remain a top priority. This improved coordination of coastal activities will save \$50 million in 2008 and hundreds of millions more over the next several years.

By July of 2008, as the newly appointed director of the Governor's Office of Coastal Activities, I worked with DNR Secretary Scott Angelle and DOTD Secretary William Ankner to stand up the newly integrated group, the Office of Coastal Protection and Restoration (OCPR). This office reports through the Governor's Office of Coastal Activities.

In August of 2008, the state announced a \$1.1 billion coastal program to help restore the coast and improve the state's hurricane protection system. This funding includes \$300 million dedicated by Governor Jindal from state income deemed in excess of projections – this constitutes the largest dedication of funds for coastal restoration and hurricane protection in Louisiana's history. The state's prior annual financial commitment was somewhere on the order of \$20-\$30 million for coastal restoration and \$15 million for hurricane protection. This large state commitment to coastal protection will complement the tens of billions recently committed by the U.S. Army Corps of Engineers to the repair and improvement of the New Orleans area hurricane protection system and take a significant first step in real implementation of the master plan. These recent actions by the State of Louisiana to reduce the vulnerability of coastal communities and infrastructure and to stabilize coastal Louisiana provide improved certainty to energy

infrastructure, national energy security and our nation's energy prices.

As this is being written, the OCPR structure is being filled with several key hires and a move is in the works to unite nearly 150 employees in a new single location. This integrated OCPR structure will allow the State to better coordinate flood protection and coastal restoration efforts with the Corps of Engineers, and increase the State's active participation in flood protection engineering efforts while continuing to push the coastal restoration efforts in the State.

Storm Season 2008: Hurricanes Gustav and Ike

Recent Hurricanes Gustav and Ike caused extensive damage in South Louisiana as a result of storm surge, wind and rainfall. Before water levels could fully recede from Gustav, winds associated with Hurricane Ike pushed additional tidal surge into coastal Louisiana. This second storm had hurricane-force winds extending over 110 miles and produced storm surges higher than those from Hurricane Rita (one of the most powerful storms in history). The result was significant flooding in all coastal parishes within the state. Hurricane Gustav and Ike-related surge overtopped some lower height flood protection systems in the New Orleans region and inundated many other communities with limited or no protection in South Louisiana. All levee districts were challenged to some degree with facing actual and potential breaches, scouring, erosion, and slope failures. All across the state we have faced extensive debris.

A benefit of the integration was OCPR's response and role during the 2008 hurricanes. OCPR manned an Emergency Service Function desk at the State's Emergency Operations Center. Even within the very short time we had been integrated, our personnel knew their roles had expanded and responded to all calls for assistance related to our new combined mission. The two hurricanes caused damage to many levees in coastal Louisiana. The extremely poor condition of our adjacent coastal wetlands caused by the Mississippi River's levees cutting off the river's sediments from the marsh exacerbated the situation – resulting in increased storm surge in populated areas of our state.

Future Challenges to Coastal Restoration and Hurricane Protection

In addition to funds required to fulfill the 30-year payment agreement for the Greater New Orleans hurricane protection system, the following is a synopsis of the events and needs in coastal Louisiana. In an effort to allow Congress to act quickly in rebuilding our coasts and protecting our communities, the following synopsis is based on previously approved and authorized projects and is designed to provide a solid foundation for the restoration and protection of coastal Louisiana. This, however, is not an all inclusive

list of critical needs, and more will be required to complete Louisiana's protection and restoration efforts.

Balancing the multiple uses and activities in coastal Louisiana that have local, state, regional and national implications with coastal restoration and hurricane protection goals will be a challenging task. Freshwater diversions will restore ecosystems – yet may affect the current fishery or maritime traffic. Hurricane protection levees will have to be designed and managed in the appropriate manner to affect the flow of freshwater that is required for nourishing wetlands and maintaining proper salinities in coastal wetland areas.

Eighty percent of coastal Louisiana is privately-owned. Coastal lands will need to be acquired or agreements made with private property owners to accommodate protection and restoration projects. Ownership of restored lands (surface and subsurface minerals) will be a likely topic of discussion.

Intense concentrations of oil and gas operations and infrastructure located in coastal Louisiana could be affected by restoration and protection activities. Energy pipelines may need to be relocated; access to production facilities and energy reserves may be reevaluated.

Environmental and hurricane protection advocates may disagree on prioritization and procedures required to achieve coastal goals – an appropriate balance will have to be reached.

The 2005 hurricanes made it clear that federal and state investment in coastal Louisiana has been insufficient. Significant progress has been made on both the federal and state level in recent months, but the sustainability of these funding levels for the next several years will require an unwavering commitment to these efforts.

Louisiana is the top producer of oil in the nation and second top producer of natural gas. In an effort to ensure the resiliency and sustainability of these activities and this area, the federal government should reinvest a portion of the billions of dollars received annually from coastal activities offshore of Louisiana. For example, interior states hosting energy production receive 50 percent of the revenues derived from energy production on federal lands within these states. An additional 40 percent of these revenues are dedicated to water projects in these states. Only 10 percent of the revenues are provided to the U.S. Treasury. For offshore production, virtually all of the revenues derived from these activities today are deposited into the U.S. treasury.

There are at least six federal agencies that regulate various aspects of coastal restoration and hurricane protection in Louisiana. While the state agencies are now integrated/coordinated, the federal government's efforts remain disparate. Improved coordination of federal resources/agencies will be required.

Continued upper river system management changes – such as locks and dams – will continue to reduce the sediment available in the river downstream. This sediment is vital to Louisiana's restoration efforts.

In Summary

Recognition of the strong relationship between coastal land loss and hurricane vulnerability must be acknowledged. Louisiana lost 217 square miles of land as a result of Hurricanes Katrina and Rita and we are still determining the land loss count from damages associated with Hurricanes Gustav and Ike. Storm surge levels this year in many of our coastal communities were the highest ever recorded, and these occurred during Hurricane Ike – a Category 2 storm.

The loss of our coastal lands and wetlands as a result of the federal governments' construction of levees requires mitigation. Congress has approved the construction of over a dozen restoration projects and Congress and the Administration recognized the importance of providing updated protection for the Greater New Orleans area. For this we are appreciative; however, disparate protection standards remain in coastal Louisiana and little has been done to mitigate from the land loss associated with river levees.



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Editorial: A Team Effort

By Ann Wills, PE

Reflecting on the Gustav/Ike storms the one memory that stands out is the teamwork that developed both within and between government agencies. This teamwork was particularly evident in a new group, The Office of Coastal Protection and Restoration (OCPR), which was formed in July 2008. The OCPR was created from a merger of the restoration portion of the Department of Natural Resources and the protection portion of the Department of Transportation and Development. This group was melded into one seamless machine working together to address the threat to our coast.

The OCPR worked as a team to coordinate the efforts of many groups; the Corps of Engineers, levee districts, parish governments, the Louisiana National Guard, and other state agencies. From the coordination at the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) office to the daily conference calls with various groups, the coastal concerns were addressed in a unified manner.

Participation in the morning conference calls included the levee district and the Corps and with various other agencies as needed. These calls were facilitated by the OCPR. The Corps gave concise reports that updated the group on post Gustav – pre Ike action items. These calls enabled levee districts to express their critical needs. The OCPR, Corps and the other levee districts that were able could offer their assistance addressed the needs cohesively.

An example of teamwork extending across agency barriers was demonstrated by Mr. Robert Routon, PE, a project manager from the OCPR. As a result of the storm organic material became suspended in Bayou Lafourche, causing the water to become anoxic which rendered the water non-potable. To flush the system the Bayou Lafourche Freshwater District began pumping at full capacity. This action caused a portion of LA Highway 308 in Donaldsonville to flood. Mr. Routon working in the water with the levee district obtained and set sand bags and utilized a small pump to reduce the amount of standing water on the road until a larger pump could be acquired.

Agency coordination was demonstrated by the post-Gustav/pre-Ike preparation of Grand Isle. Grand Isle lost its front levee in Gustav. With Ike heading towards the Gulf the Corps worked with the Louisiana National Guard who assisted with manpower placing sand bags and burrito bags to protect a portion of the island. The Office of State Parks worked the section of coast at the park and the Office of Coast Protection and Restoration worked to have rocks placed at the Coast Guard Station. Coordination was required for the equipment transport with the Department of Transportation. The access bridge

was scheduled to be replaced in the spring and had to have the loads from the equipment distributed correctly when it was crossed.

After the storms the Corps provided immediate aerial reconnaissance. The teamwork continues even after the storms. Damage assessment teams were formed with personnel from the OCPR, the Corps and the levee board and locals. Through the aerial and ground assessments, a joint effort is being made to resolve the problems created by the storm.

In summary, the storm left in its wake a path of destruction, but the teamwork developed through this adversity will live on long after the debris is cleared and the damage repaired.

Advancing to the Fellow Grade

ASCE Fellows occupy the Society's second-highest membership grade, exceeded only by Honorary Members. There is no direct admission to the grade of Fellow. Fellow status must be attained by professional accomplishments via application and election by the Membership Application Review Committee (MARC). It is a prestigious honor held by fewer than 6% of ASCE members.

Fellow Grade Criteria:

1. Must advance from grade of Member.
2. Must be a licensed Professional Engineer or Professional Land Surveyor.
3. Must provide three (3) references from Society members.
4. Must be nominated by an Organizational Entity of the Society.
5. Must have had responsible charge for not less than ten years, in the grade of Member, of important work in engineering or surveying requiring the knowledge and background gained from engineering training and experience.

For more information:

<http://www.asce.org/membership/fellowgread.cfm>

Editorial: Second Responders

By Deborah Ducote Keller, PE

Most Louisiana residents experienced hurricane preparation, response, and recovery to various extents this year, and for some, it was a repeat performance. At some point during those hectic weeks of Gustav and Ike, I remember being asked if I was a First Responder. Without hesitating I replied that I was a Second Responder. If you are reading this you may be a Second Responder also.

Everyone recognizes that the First Responders to a disaster are those with the mission to save lives and secure the situation i.e. police, military, medical workers. But not as well known is the role of the Second Responders as the next wave of people that enters a disaster area. In my opinion, the key professionals among the Second Responders are the engineers, but recovery is a multi-disciplined, team effort that includes lawyers, accountants, contract administrators, risk managers, and the like. One of the major differences between First and Second Responders is that long after the First Responders have left, the Second Responders will still be working on recovery, sometimes for years. First Responders are sprinters, while Second Responders are marathon runners. Other differences include that Second Responders are usually not trained in crisis management and working under the challenges and constraints that a disaster causes. From my own experience, Hurricane Katrina was a huge learning curve for my engineering staff, me, and the private consulting engineers that assisted us. We learned about such things as FEMA regulations and project worksheets, insurance claims, public adjusters, class action lawsuits, and hazard mitigation.

One major difference is that First Responders choose their careers knowing the mental, physical, and emotional commitments required, even under extraordinary circumstances. Families of First Responders understand that commitment. It takes a disaster to demonstrate how critical the skills of Second Responders are to recovery. In the past three years our recovery team experienced the sudden loss of two talented, committed professionals. I am told that this is not uncommon under the stress of long-term recovery work. I also know that while many Second Responders want to make the commitment to being the last to evacuate, or to remain, or to be the first to return, their personal situations may not allow them to do so. I am able to make my commitment because my personal situation allows and my family supports that commitment.

Engineers who are Second Responders assess physical damages, estimate repair/replacement costs, prioritize projects, design and inspect emergency repairs, and coordinate recovery efforts. For the Second Responders to do their jobs well requires commitment,

time, money, effort, and training from the top down and from the bottom up. In other words, the whole organization has to buy into the Total Quality Management (TQM) approach to disaster management- PLAN-ACT-REVIEW-CHANGE. This is absolutely necessary when disaster strikes the area in which the Second Responder works and/or lives. Hurricanes are one of the few threats that provide warning, but many other hazards do not. Therefore, the TQM approach starts with planning ahead by both the Second Responders and their employers. Planning includes a written emergency operations plan, a continuity of operations plan, and a hazard mitigation plan. If the Second Responder doesn't pre-plan, then he or she cannot fulfill a commitment to follow the employer's plans.

The emergency operations plan will identify who are the Second Responders, what do they need to perform their duties, and who are the critical partners they will work with. The plan will outline who does what and when. It will provide a timeline for key decisions such as dismissal, evacuation, satellite work locations, and entry into the disaster area. This plan will indicate the lines of authority and list responsibilities. Alternate work arrangements such as means of communicating and accessing files will be addressed. The continuity of operations plan will prescribe how to operate with only the essential resources to do the critical tasks to perform core functions until normal operations can resume. With each mock or real disaster, there will be opportunities to review if any planning assumptions were wrong, variables were overlooked or outcomes failed. These plans are expected to be reviewed and revised at least annually.

As engineers we know that risk is a mathematical function of threat, vulnerability, and consequence. The hazard mitigation plan will be an exercise to identify the possible threats, determine which critical assets are vulnerable to those threats, and quantify the consequences of damage to those assets. The purpose of the hazard mitigation plan is to ensure that the commitment, time, money, effort, and training are directed to the most likely threats to the most vulnerable areas so as to minimize the loss. Remember, Second Responders are only as good as their ability to respond, and not all emergencies have to become disasters.

Branch News and Leadership Forum

BATON ROUGE

By Robert W. Jacobsen, PE, Past President

The Branch held monthly luncheons on August 28 and September 18. Our speakers were Dr. William Ankner, Secretary of the Louisiana Department of Transportation and Development, and East Baton Rouge Mayor-President Kip Holden. Both meetings were well supported, with over 100 members and guests in attendance.

Secretary Ankner addressed his priorities for DOTD, including shifting the burden of

road financing away from the gasoline tax and improved traffic signaling. Mayor Holden reviewed his proposed public works plan and tax.

The August meeting was co-hosted with Louisiana Engineering Society and sponsored by Sigma Consulting Group. The Branch presented recognition plaques to our 2008 professional awardees:

- C. Carter Brown, Wall of Fame
- Gordon Boutwell, Lifetime Achievement
- Billy Prokaska, Outstanding Civil Engineer
- Kim Garlington, Outstanding Government Civil Engineer
- George Voyiadjis, Educator of the Year
- Jeff Duplantis, Outreach
- Adam Smith, Young Civil Engineer
- Rudy Simoneaux, Young Government Civil Engineer



Mr. Brown's widow, Ms. Silvia Brown, and his daughter, Ms. Ellen Walsh, were present to accept the Wall of Fame award.

The September meeting was sponsored by ABMB Engineers and included the installation of the Branch 2008-2009 officers.

Several Younger Members are working to start a Baton Rouge chapter of Engineers Without Borders. Anyone interested should contact our YM Chair, Danielle Chabaud at Dchabaud@abmb.com.



ACADIANA

By E.R. DesOrmeaux, PE

The Acadiana Branch installed 2008-09 officers at its installation dinner at the Petroleum Club in Lafayette, LA on September 30, 2008.

Officers for the coming year are:

- Clint McDowell, PE
President
- Joshua Stutes, PE
President Elect
- Shawn Simon
Vice President
- Luke Hebert, EI
Treasurer
- Randel Badeaux, EI
Secretary
- Dax Douet, PE
Director

At the installation banquet, the following awards were made to very deserving members:

Lifetime Achievement Award -
Shirley Stutes, PE

Outreach Award -

Allison J.P. "Sonny" Launey, PE

Outstanding Civil Engineer Award -

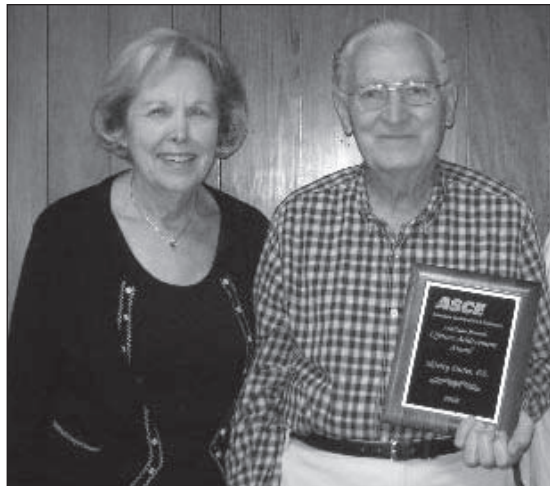
Raymond J. Reaux, PE

Outstanding Young Civil Engineer Award -

Luke Hebert, EI

Outstanding Young Government Civil

Engineer Award - Joshua P. Stutes, PE



Mr. and Mrs. Shirley Stutes, PE

IN MEMORY



Gordon Boutwell PhD, PE

Branch members, as well as the whole Louisiana Section were saddened to learn of the passing of our recent Lifetime Achievement Award recipient, Dr. Gordon Boutwell. Dr. Boutwell founded Soil Testing Engineers, Inc. in Baton Rouge in 1974, and remained President of STE until Ardaman purchased the company in 2007. He was a highly respected Geotechnical Engineer and served on both ASCE and National Science Foundation panels investigating the Hurricane Katrina related levee failures in New Orleans. Our community and profession are deeply indebted to him for his service. He will be missed and our sympathies and condolences are with his family.

NEW ORLEANS

By Nathan J. Junius, PE, President

Coming off of another successful Fall Conference, the 2008-2009 New Orleans Branch is off to a great start. With over 600 attendees and exhibitors, the event was well attended and continues to grow. I personally would like to thank Frank McCaskell and the Fall Conference Committee for their hard work and getting a great show together in spite of their hectic professional and personal lives.

I would also like to thank Fred Fuchs with Boh Bros. Construction CO, LLC for doing an excellent job with the billboard and slogan this year. Much time and hard work was put into the billboard as seen



below. The billboard was posted on Airport Blvd. on a 45' x 15' billboard and also as a digital advertisement seen from I-10 near the Superdome. The branch is very thankful of Section and National for providing the funds for the billboard through the SPA Grant. At a time when civil engineers in New Orleans face much criticism, this billboard reminds the public just a little bit of what civil engineers do and have done for New Orleans.

We are currently planning our monthly luncheon meeting schedule for this year and look forward to many great speakers, interesting topics and the best food anywhere. Anyone interesting in submitting a speaker, topic or restaurant can send suggestions to njunius@lhjunius.com. Please visit our website at www.asceneworleans.org for meeting updates and general information. Chris Sanchez will be taking over the website this year and plans to have a more interactive website that will be useful to our members.

SHREVEPORT

By Todd Henry, PE, President

On September 19, 2008 the Shreveport Branch hosted the 2008 ASCE Awards and Officers Installation Luncheon. We had a great turn out with almost fifty members in attendance. Congratulations to all who received an award and a special thank you to Dr. Bobby E. Price, PhD, PE for installing our officers.

Our annual young members canned food drive kicked off in October. All canned food items will be donated to the Providence House in November. The Providence House is a residential development center for homeless families with children. Their goal is to stop the cycle of homelessness by helping families get the resources needed to establish independent living.

November 2008 - The Shreveport Branch will be hosting Liz Swaine, Communications Director for Calumet Lubricants Company located in Shreveport, Louisiana. She will be speaking about recent developments in the oil and gas industry in our area (Haynesville Shale)

December 2008 – Shreveport Branch Annual Christmas Luncheon

January 2009 – The Shreveport Branch will be hosting Butch Ford, PE and Bill Altimus of Bossier Parish. They will be discussing the Bossier Parish Police Jury Drainage Impact Guidelines for New Development and No-Rise Certificates. Ali Mustapha, City Engineer for Shreveport will also join the discussion and will explain what the City of Shreveport is doing with regards to stormwater detention.

February 2009 – The Shreveport Branch will host the Joint ASCE-LES meeting and Dr. Bobby E. Price, PhD, PE, will be making a presentation on "Ethics".



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ASCE-SEI New Orleans Chapter

By Om Dixit, PE, FASCE

Since our report in August issue of this magazine, ASCE SEI New Orleans Chapter hosted one seminar and has planned the following future seminars in New Orleans:

October 16, 2008

2008 Annual Herbert Roussel, Jr. Marine Structures Seminar

GULF OF MEXICO OFFSHORE PLATFORM ASSESSMENT, DESIGN, AND ANALYSIS—TODAY AND TOMORROW (API Recommended Practice in RP2A)

Paul Verowsky addressed API RP2A Offshore Design Code changes and the effect on the design of offshore structures. He also addressed the criteria for evaluation and usage of existing platforms for new drilling projects. The seminar was attended by about 60 members.

FUTURE SEMINARS:

November 12, 2008

Local Building Design Codes and IBC 2008 Code

Local Parish Officials

(Postponed from August 2008)

Several building officials from the parishes of Orleans, Jefferson, St. Tammany, and St. Bernard will share their knowledge and experience and discuss the latest building codes including International Building Code 2008. The presentation will be followed by a Question and Answer session. Such discussion will help the engineering community to understand the building official's interpretation of IBC 2008 and its impact on structural design.

January 28, 2009

Using the 2008 MSJC Code and Specification

Dr Richard Klingner, University of Texas, Austin, Texas

(Date is tentative)

This seminar will deal with the changes and usage of Masonry Standards Joint Committee's (MSJC) 2008 Building Code Requirements and Specification for Masonry Structures. The new code includes numerous changes and enhancements including provisions on self consolidating grout, reformatted and clearer seismic design requirements, revised anchor bolt capacity equations, and defined inspection frequencies of key aspects of masonry construction.

More details about these seminars will be posted on the ASCE New Orleans Branch website as soon as they are finalized. The committee is looking for good topics and speakers for future presentations. Members with expertise in above areas would be welcome to join the Executive Committee. For any suggestion and joining the Executive Committee one can contact Chairman Jay Jani, PhD, PE, at jay.jani@engconsultsvcs.com.

ASCE SEI New Orleans Chapter had a change of officers for 2008-09. Dr. Jay Jani, PE has been elected as Chairman and William Rushing, Jr., PE is appointed as Vice Chairman for 2008-09. James Danner, P. E. continues to serve as Treasurer and Om Dixit, PE continues to serve as Newsletter Editor. The outgoing Chairman Mike Chowdry, PE did great job of leading the Chapter during past year. The chapter had hosted 6 seminars, provided partial funding to University of New Orleans (UNO) Students for Concrete Canoe Competition, provided emergency funds to UNO for transporting concrete testing equipment donated by Tulane University. It also sponsored awards at Regional Science Fair and provided volunteer support to ASCE Sponsored Kid Tent at New Orleans Jazz Fest.

All seminars are held at the University of New Orleans. Seminar dates, pertinent information, and registration can be found on the New Orleans Branch website at www.asceneworleans.org. To add your name to our mailing list, e-mail Om P. Dixit at om@fenster-maker.com.



Jay Jani, Chapter Chair; Paul Versowsky, Speaker and John Crutti, Seminar Coordinator after the seminar.



Part of the audience of about 60, listen to Paul Versowsky in the aisle on his presentation on Offshore Platform Assessment.

STUDENT CHAPTER NEWS

LOUISIANA TECH UNIVERSITY

The Deep South Conference Concrete Canoe Competition (Louisiana, Arkansas, Mississippi, and Western Tennessee) was held on April 4-6, 2008 in Baton Rouge at Louisiana State University. Louisiana Tech University took "FIRST" place in the thirteen team competition. They continued on to the 21st Annual National Concrete Canoe Competition held at Ecole de Technologie Superieure, Montreal, Quebec, Canada on June 19-21, 2008 where they finished 21 out of 22 in the overall competition. The Shreveport Branch was able to donate \$2,000.00 in support of the competition this year. I would encourage companies and branches to help sponsor a team at a University in your area.



Deep South Conference Concrete Canoe Competition

LOUISIANA STATE UNIVERSITY

By Steven Berniard

The 2008 LSU Steel Bridge Team continued its winning tradition qualifying for the National Student Steel Bridge Competition for the sixth straight year which was held in Gainesville, Florida at the University of Florida in May. To qualify for the national competition, LSU placed second in the Deep South Regional Competition held at LSU in April. The team finished 17th place overall at nationals, out of the 42 teams that also qualified for the national competition, which was better than any team in the state and the Deep South Region, even though incurring more penalties than necessary. LSU's bridge was put together in 5 min. 28 sec. and a weight of 190.2 lbs. (before penalties), giving LSU an overall price of 3.3 million dollars and its 17th place finish (after penalties).

The 2009 team has high hopes for this year and plans on continuing the streak and competing at the 2009 NSSBC in Las Vegas, Nevada.



LSU Student Chapter steel bridge team.

UNIVERSITY OF NEW ORLEANS

By Daniel Bobeck

The fall semester started out pretty slow for UNO students, after a mandatory evacuation in September for hurricane Gustav we came home to the uncertainty of Hurricane Ike. We are now settled in to the semester and things are returning to normal. The University of New Orleans ASCE student chapter has been active in community service this semester. On Friday September 26, President Daniel Bobeck and fellow ASCE member Andrea Rivera volunteered at Eleanor McMain School for "Viva Technology", which is a day of math and science related projects designed to help 7th and 8th grade students visualize a future career in science, technology and engineering. The group of students led by Daniel Bobeck won 1st and 2nd place overall in their design projects.



UNO Student Chapter ASCE Community Garden Event.

l to r: Yelena Rivera, Ali Tareh, Mallory Davis, Corina Robles, Jenni Schindler, unknown gentlemen, Daniel Bobeck and Allen Hammler.

On Friday October 10th UNO ASCE members Daniel Bobeck, Ali Tareh, Corina Robles, Mallory Davis, Jenni Schindler, Allen Hammler and Yelena Rivera volunteered at St. Margaret's Nursing Home in the upper ninth ward for "A Community Garden Convening" (a weekend of volunteer gardening across the city). Our members built raised vegetable gardens to be used by the residents of St. Margaret's and the local grade school children.

Finally, we will be hosting a fundraiser for our Steel Bridge and Concrete Canoe Teams. It will be held Friday November 14th from 6:00 to 10:00pm at New Orleans Yacht Club in West End Park.

Everyone is invited. Tickets are \$20.00 per person and include food, drink and entertainment. Our Steel Bridge and Concrete Canoe teams will be giving a presentation on the design and construction of our bridge and canoe. Engineering Firms are invited to come meet their future employees in a relaxed cocktail party atmosphere. Firms can purchase group tickets at \$500.00 for up to 20 employees or \$1000.00 and we will include your company logo on our T-shirt designs. If you are interested in group tickets or title sponsorship.

Please Contact Daniel Bobeck at dfbobeck@uno.edu or (504)-813-3859 for information about this event. Checks

can be made out to UNO ASCE and mailed with your company and contact information to:

UNO ASCE Attn: Dr. Gianna Cothren
Eng Bldg Rm 810
2000 Lakeshore Dr.
New Orleans La. 70148

UNIVERSITY OF LOUISIANA AT LAFAYETTE

By Amy Henschke

The Chapter held its first meeting of the Fall 2008 semester on September 23 on the University of Louisiana campus. The guest speaker for the night was Dr. Donald Hayes, a professor at UL, who addressed the topic of time management. The talk gave students insight into the effective use of time and energy to become efficient as students and as future professionals.

The next meeting of the semester is planned for the second Thursday in October during which the Chapter will host its annual Fall Barbecue at Girard Park, adjacent to the UL campus. This annual event gives Civil Engineering students the chance to meet and socialize with their fellow classmates as well as with faculty and

local practitioners. The event also serves as an opportunity for freshmen and new students to become interested and involved in the chapter's activities.

Preparations are also underway for the activities of the upcoming Deep South Conference. The Chapter hopes to participate in the Steel Bridge and Concrete Canoe competitions at the conference, which will be held at Arkansas State University in March 2009.

MCNEESE STATE UNIVERSITY

By John Winfield

In April 2008, the McNeese State Chapter participated in the concrete canoe races for the first time in four years. Because no one from the 2004 canoe, the Poke Boat, was actually on the team, the design and construction of the 2008 canoe was purely for building knowledge, experience, interest and enthusiasm for the tradition. The canoe was appropriately named, "Rita's Revenge," because of the affects on this event due to Hurricane Rita, which struck in fall of 2005 and forced McNeese State to close for over half the semester. We made the 125-mile journey to Baton Rouge with the canoe intact and ready to race the next morning. The real moment of truth for our canoe was getting it into the water and the passing of the swamp test. After completely submerging it, we stepped back



McNeese Left to right: Jasmin, Mauria

and watched it pop up out of the water like a cork....we were very pleased with that. After a long day of racing, we were informed that we did place third in the Men's Sprints. The racers were our former chapter president, Renus Kelfkens, and our current chapter president, Jeffery Tyson. With this newly revised spirit for the competition, and new officers and members, we plan to make a big comeback in Jonesboro, Arkansas next year. New officers for the 2008/2009 year are Jeffery Tyson, President, Mauria Caldwell, Vice President, John Winfield, Secretary, Joy Abshire, Treasurer, Ben Clark, Alternate Senator, and Jennifer Hobbs, Public Relations.



McNeese Left to right: Renus, Jeff

SOUTHERN UNIVERSITY

By Brandon M. Johnson

This past year has been a great one for Southern University ASCE. Although we are currently in the process of revising some of the things we have been doing over the past years. This year, our main focus has been fundraising and increasing our student membership. We have had several fundraising drives by selling T-Shirts with our slogan "Engineering: A real major". This has been a good source of income for our chapter but with all of the events we wish to participate in we feel now that we need other sources like grants. We are currently in the process of drafting a proposal for grants. This past year we have participated in the Deep South Conference, Order of the Engineers ceremony which we plan to do at the end of this semester, and several mixers for students with the homecoming tailgate being most recent. Also we plan to reach out to the community to volunteer our services to the Baton Rouge area. A few semesters ago we helped remodel a home in North Baton Rouge. We hope to continue this

because we believe service to our community is a very important part to our organization. With the semester almost over we plan to have elections in November. We hope to have new and exciting members replace the outgoing officers like myself. All and all we are excited about our chapter's future. We would like to thank the Baton Rouge chapter for all the help that we have received and the many people who volunteered their time to our organization.



ASCE STUDENT CHAPTER JOINED LSU-ASCE IN A HABITAT FOR HUMANITY SERVICE PROJECT

By Danielle R. Chabaud, Engineer Intern

The ASCE Younger Member group and Southern's ASCE student chapter joined LSU-ASCE in a Habitat for Humanity service project on November 1, 2008. Sarah Laakso, the community service chair for LSU-ASCE, organized the service project and the younger members were eager to show our support of the



student chapter. We had a tremendous turnout, beautiful weather, and hours of fun working on two houses for two very deserving families.

The houses were located in Rosewood Subdivision on Elvin Drive (near Burbank Dr. and Bluebonnet Blvd.). We prepared the two houses



for painting by washing the siding, caulking the joints, and priming. It was hard work but it definitely paid off. The Habitat for Humanity staff were extremely appreciative of our efforts and were impressed with our positive attitudes.

All in all, the service project was a huge success. We look forward to future service projects with both student chapters and we hope that our involvement with the student chapters encourages them to stay involved with ASCE even after graduation.

ASCE ANNOUNCES NEW K-12 OUTREACH RESOURCE CURIOUS GEORGE: SCIENCE CURIOSITY CENTER

It's never too early to start introducing children to concepts that form the basis of a strong foundation in civil engineering. PBS has released new Curious George Science Curiosity Center activities for parents, teachers and others who work with children in educational settings and outreach events to foster science and math literacy. The activities have been produced in connection with Curious George, an animated television series based on the popular books by Margret and H.A. Rey. This season, Curious George will be exploring topics in earth science. The series airs daily on PBS KIDS. Downloadable banners, signs, activity sheets and take-home handouts are all available for FREE on the Curious George Web site in the Activities & More section <http://pbskids.org/curiousgeorge/parentsteachers/activities/>. Curious George is a production of Imagine Entertainment, WGBH Boston and Universal Studios Family Productions. For more information contact Leslie Payne, Manager, Pre-College Outreach at 703-295-6364.

2009 LEADERSHIP TRAINING IN GOVERNMENT RELATIONS SCHEDULED

The 2009 Leadership Training in Government Relations Program, or the "Legislative Fly-In", will take place March 25-26, 2009 in Washington, D.C. Applications will be available shortly at <http://www.asce.org/govrel>.

This one-and-a-half day program provides Section leaders and interested ASCE members with training on important civil engineering issues and how to establish and maintain relationships with elected officials.

The 2009 program will coincide with the release of the 2009 Report Card for America's Infrastructure, and attendees will be the first to bring this message of infrastructure renewal to elected leaders on Capitol Hill.

There is no registration fee for ASCE members to attend, but you are responsible for your own travel expenses. A limited number of travel stipends are available.


For further information visit <http://www.asce.org/govrel> or contact ASCE Government Relations at govwash@asce.org or 202-789-7850.

— Calendar of Events —

December 4-5, 2008	ASCE Seminar * Design and Strengthening of Shallow Foundations for Conventional and Pre-Engineered Buildings, Atlanta, Georgia.
December 4-5, 2008	ASCE Seminar * Leadership Development for the Engineer, Atlanta, Georgia.
December 11-12, 2008	ASCE Seminar * Introduction to Detention Pond Design for Parking Lots and Urban Drainage, Dallas, Texas.
December 11-12, 2008	ASCE Seminar * Structural Design of Industrial Facilities, New Orleans.
December 18-19, 2008	ASCE Seminar * Design and Renovation of Wood Structures, New Orleans.
January 8-9, 2009	ASCE Seminar * Design Build Contracting, San Antonio, Texas.
January 15-16, 2009	ASCE Seminar * Storm Sewer System Design using SWMM, San Antonio, Texas.
January 15-16, 2009	ASCE Seminar * Design and Evaluation of Highway Bridge Superstructure Using LRFD, Orlando, Florida.
January 22-23, 2009	Louisiana Engineering Society <i>LA Joint Engineering Societies Conference</i> , Lafayette. For more information email les@les-state.org
January 22-23, 2009	ASCE Seminar * Design and Evaluation of Highway Bridge Superstructure Using LRFD, Orlando, Florida.
January 22-23, 2009	ASCE Seminar * Designing Aluminum Structures, Tampa, Florida.
January 22-23, 2009	ASCE Seminar * Pumping Systems Design, San Antonio, Texas.
January 22-23, 2009	ASCE Seminar * Seismic Design and Performance of Building Structures, Atlanta, Georgia.
January 22-23, 2009	ASCE Seminar * Wind Loads for Buildings & Other Structures, Vicksburg, Mississippi.
February 4-6, 2009	ASCE Seminar * Structural Vibration Analysis, Design and Troubleshooting, Houston, Texas.
February 5-6, 2009	ASCE Seminar * Pipe and Pipeline Renewal, Orlando, Florida.
February 5-6, 2009	ASCE Seminar * Progressive Collapse Mitigation: Practical Analysis Methods & Proven Solutions, Orlando, Florida.
February 5-6, 2009	ASCE Seminar * Residential Land Development Strategies, Nashville, Tennessee.
February 5-6, 2009	ASCE Seminar * Wetlands & 404 Permitting, Nashville, Tennessee.
February 12-13, 2009	ASCE Seminar * Advanced Detention Routing: Improving the Operation & Effectiveness of Detention Facilities, Atlanta, Georgia.
February 12-13, 2009	ASCE Seminar * Structural Condition Assessment of Existing Structures, Tampa, Florida.
February 12-13, 2009	ASCE Seminar * Testifying Skills for Civil Engineers, San Antonio, Texas.

*For more information, call ASCE toll free at (800)548-2723 or visit the ASCE website: www.asce.org.
For the schedule and registration for the ASCE web seminar continuing education regularly offered:
Visit the ASCE website / continuing education / distance learning / live interactive web seminars.


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