

# THE LOUISIANA CIVIL ENGINEER

ACADIANA BRANCH • BATON ROUGE BRANCH  
NEW ORLEANS BRANCH • SHREVEPORT BRANCH  
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**E.R. (Ray) DesOrmeaux, PE**  
Section President 2007-2008

#### **FEATURE:**

**Mississippi River Gulf Outlet  
De-authorization**

#### **NEWS:**

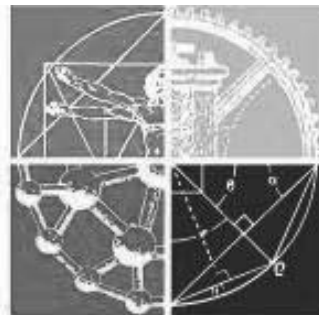
**Section recognizes members  
Section awards fellowship**

#### **FUTURE:**

**Annual Spring meeting  
and Conference in Lafayette  
April 9-11, 2008 (Tentative)**

**Deep South Conference of  
ASCE Student Chapters  
in Baton Rouge  
March 28-29, 2008**

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



# President's Message

By Timothy M. Ruppert, PE

It is a privilege to serve as President of the Section for the 2007-2008 administrative year. In attempting to represent the Section with the duty and standard of care required, I will be calling on Section members, including past officers, to contribute their ideas, and thoughts concerning the pertinent issues facing the Section, and the ASCE in general. In particular, the counsel of talented civil engineers representing the branches will be sought and relied on to provide the direction and leadership we need.

Last year, President Ruppert began the initiative to develop and implement a *strategic plan* for the Section. Although the vision and mission of the national ASCE is defined and to some extent applicable to the Louisiana Section, I believe it is important for our leadership to look inward and develop a vision and mission with accompanying goals and objectives that are unique to the Section in service to its members and community. To do this the Section's plan must encompass the important things that we are doing well and the important things that we can add or change to better serve our members. The old saying that *time changes everything* is applicable here. This is especially true considering the impact that the catastrophic events of Hurricanes Katrina and Rita visited on Louisiana.

The plan to execute the proposal to develop a strategic plan for the Section that effectively addresses the needs of the Section and its membership includes several key initiatives.

- Appoint a special committee to develop and propose to the Board the vision and mission statements, goals, and objectives of the Section to help form a blueprint for the leadership of Section and branches to consider. An adopted strategic plan is intended to become a living document to identify, focus on and commit to the important needs the membership, and to measure our achievement in meeting them. This special committee will possibly consist of the 4 Directors-at-Large and 4 past presidents.
- Appoint a special committee to update the Section Operating Guide.
- Honor the pledge I made to you during the Section Annual Meeting to visit each branch, attending a general membership meeting for allowing branch members to express their needs, concerns and interests in how they may be more effectively served by the Section.
- Honor the second pledge I made to visit each student chapter in the Section personally to state the Section's continuing interest and support of their activities.
- Reactivate the Section's Past Presidents Council as the vehicle for advice and direction as the Section attempts to adopt a strategic plan and effectively focus its priorities and objectives.
- Develop a disaster recovery plan for the

Section and the branches consistent with the valuable lessons that the hurricanes taught us.

In addition to the initiatives identified, there are obligations that should be of significant importance to our members and leaders. One obligation is to *maintain effective mass communication with our members*. For 15 years, we have had an extraordinary vehicle for general communication with our members through *The Louisiana Civil Engineer*, the Section's journal. Part of its success is due to the long-term commitment of its editor, Jim Porter. This past year the journal was recognized as the *Outstanding Journal* in the ASCE national community. In this regard, we must assess and address the expectations of the members regarding the future of the journal and other means of mass communication such as the Section's website and mass email.

Another obligation is to *give attention to the character of the Section's membership*.

- Consider an effective long-term membership development plan that includes improved services and attention to members that will facilitate any active membership recruitment and retention efforts. Membership recruitment is and has been viewed as a weakness in the Section and the branches. Considering recent trends in the Section's membership growth, the number of Section members has been *steady* for a number of years. However, other statistics indicate a general increase in the number of civil engineers that have graduated and been employed in Louisiana.
- Attract and involve younger members and facilitate aiding them through training and opportunities to become future leaders by giving them meaningful responsibilities in the Section.
- Reasonably insure that the Section effectively represents its members, regardless of their chosen area of practice such as industry, government, education, consulting and construction.
- Study the effectiveness of the representation or the lack thereof for the various geographic areas of Louisiana.

The Section and its branches are in very good financial condition relative to their operating income and revenues, and their cash reserves. Maybe too good. Considering that the Section and its branches are part of the ASCE — a non-profit organization — I feel obligated to emphasize the *non-profit* aspect. I am of the opinion that the Section and its branches should not be accumulating cash reserves beyond what is consistent with prudent business practices to reasonably assure financial stability and continuity in service. Cash reserves accumulated beyond this amount are probably inappropriate and they should be expeditiously committed to programs that serve our members. These funds should be devoted to developing programs that serve our members and/or subsidizing existing programs



and services to our active members to minimize their cost of participation.

Support of the Student Chapters, including *financial assistance* from the Section and the branches, is an area of particular interest and importance to me. The Section and branches should carefully consider how to address the needs of these important future civil engineers.

Through long experience, I will not succumb to the naïveté of believing that the initiatives and obligations mentioned here will be achieved in one administrative year. However, I do believe that they have a strong validity long recognized by past Section leaders and they should continue to resonate clearly with the future Section leaders. To this extent the initiatives and obligations will not be considered just an overly ambitious agenda for this administrative year but a template or blueprint for a continuing effort in future years modified as may be required.

As your president, I plan frequent interaction with our Region 5 Board of Governors and with our ASCE national Board of Directors and others in the ASCE leadership. This is an important function to reasonably assure through this office that the Section's members, leadership and all the civil engineers in Louisiana have an opportunity to participate in this forum of current issues that affect civil engineers. Further, the positions and sentiments of the Section's members will be well represented. You are encouraged to periodically visit the various ASCE websites, at the branch, section, and national levels, keeping current on the issues of interest to civil engineers. You are invited to contact me, either by email or telephone to express your concerns/recommendations about the issues of interest to you.

In closing, it is my intention to be an attentive listener to you and your representatives with whom I have contact. It is further my intention that I provide and that you receive the representation and leadership we should all expect from our leaders as members of the Section and the ASCE in general. In this, you have a significant role. Help me be a good President! And, I will do my best to represent you and the Section to the highest standard possible.

# Mississippi River Gulf Outlet De-Authorization

By Gregory B. Miller

## Introduction

In 1948, more than 500 people gathered in the Roosevelt Hotel in New Orleans to speak in favor of a new shipping channel proposed in southeast Louisiana. At the time, the public and political debate centered primarily on whether to build this new channel on the east bank or west bank of the Mississippi River.

In 1956, the U.S. Congress authorized the Mississippi River Gulf Outlet (MRGO) as a short-cut from the Port of New Orleans to the Gulf of Mexico. Known as "Mister Go," the shipping channel has been at the center of environmental, economic and public safety debates in southeast Louisiana for over 50 years.

Hurricane Katrina's winds and waves brought more focus on the MRGO with public officials and environmental groups calling for closing the channel. Today, in many sectors, the debate has moved beyond whether the channel should be maintained for shipping. The focus is on how to close the channel, restore the coastal wetlands and build new hurricane protection levees in the area. In 2006, the Congress ordered the U.S. Army Corps of Engineers (Corps) to prepare a plan to de-authorize the MRGO navigation channel. Described herein is some of the history of the MRGO navigation channel and the Corps' current efforts to complete the Report to the Congress on its de-authorization.

## Expanding shipping and commerce

Post World War II New Orleans was a city centered on the shipping industry. This should be no surprise given that the location of a strategic port was the reason for founding New Orleans on the banks of the Mississippi River. The Port of New Orleans was a driving force in the local economy and leaders looked to emerging opportunities for international trade through the expansion of maritime facilities.

Keeping the Mississippi River open for shipping and other waterborne commerce is no easy feat. This powerful river is a fast-moving, meandering route from New Orleans to the Gulf of Mexico. Ship captains and river pilots face these challenges and others such as fog, high river stages in the spring and storms as they move cargo to and from the Port's wharfs. Keeping the River open requires annual dredging to maintain adequate depth for ships especially in the delta at the mouth of the River.

Alternate routes for outlets from the Mississippi River to the Gulf had been investigated in the interest of seagoing navigation from time-to-time for over a century. The Corps' records show that a ship canal was considered as far back as 1852 in a report to the Congress. In the 1940s, officials with the Port of New

Orleans, and locally and nationally elected officials, requested that the federal government build a shorter navigation route from New Orleans to the Gulf.

These leaders, along with the Louisiana Legislature, envisioned two purposes for this channel. It would serve as a safer, quicker route to the Gulf, and it would expand the navigation capabilities of the area. Their vision included expanded port facilities and a new *Centroport*, a vast, import/export complex complete with warehousing, a cargo airport, and road and rail connections. The Centroport was planned for the area that is now the north and south shores of the Gulf Intracoastal Waterway (GIWW) in the Almonaster-Michoud area in Orleans and St. Bernard Parishes, and the area on the west side of the MRGO in St. Bernard Parish.

## Changing times

The Louisiana Legislature of 1944 officially empowered then Governor Jimmy Davis "...to aid and assist the federal government in obtaining and completing... a tidewater canal from New Orleans to the Gulf on the eastern side of the Mississippi River..." The Congress authorized the channel's construction through the River and Harbor Act of 1956, and authorized it to be built by the Corps. Construction began in 1958 and it concluded 10 years later. The channel was named the Mississippi River Gulf Outlet.

In a 1956 editorial, *The Times-Picayune* newspaper fully endorsed the plan for the new MRGO shipping channel stating

For more than a decade civic leaders of the Mississippi valley have urged building of a tidewater channel from New Orleans to the Gulf of Mexico. This worthy project was moved closer to realization Wednesday when the public works committee of the United States Senate, without a dissenting vote, approved legislation to authorize the channel... The new channel, of course, will serve two fine purposes. It will provide a shorter, less hazardous route from New Orleans to the open sea. It will make possible expansion of the Port by providing additional water-frontage where industrial plants and more wharves can be built... Spearheading the effort has been the New Orleans Tidewater Development Association, with full co-operation from the Louisiana delegation in Congress and legislators from many other states.

Nearly a year after Hurricane Katrina in June 2006 Louisiana's Governor wrote about MRGO stating

...our work must include a more precise



plan for closure, restoration of the extensive wetlands lost as a direct result of the MRGO, and the integration of this closure into the comprehensive hurricane protection plan. We must consider the navigation needs that will be affected by closing the MRGO to deep draft navigation, including expediting the construction of the new IHNC (Inner Harbor Navigation Canal) Lock and relocation of businesses currently depending on the MRGO.

Shortly thereafter, the Congress passed legislation calling on the Corps to develop a comprehensive plan to de-authorize deep draft navigation on the MRGO.

While the Corps is often perceived as culpable in the problems associated with the existence of the MRGO, the role of the Corps was and is to act on the direction it receives from the Congress and the President. In the case of the MRGO, the Corps was originally directed to study the need for the MRGO. Given the need for the MRGO, the Corps was directed by the Congress backed by its Louisiana delegation to build it. The current direction to the Corps is to plan for closing the MRGO channel and repairing the damage to coastal wetlands in the vicinity. The Corps stands ready to serve this new direction and work toward protecting and restoring the coastal communities of southeast Louisiana.

## Public involvement

The Corps established a plan of action to develop the Interim and Final Reports to Congress in response to the Congressional direction to develop a MRGO de-authorization plan. The plan included federal, state and local government parties, environmental groups, landowners, navigation interests, and other organizations and individuals who are stakeholders were invited to assist in the preparation of the reports. A series of public stakeholder

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forums was held that included technical presentations and open discussions on topics including wetlands, navigation, storm protection, and the local economy.

Each stakeholder group was asked to develop what it considered viable plans for the deauthorization of the MRGO from its junction with the GIWW to the Gulf, the environmental restoration measures in the vicinity of the MRGO, and the hurricane protection components. Several stakeholder groups prepared such plans and presented them at roundtable meetings and during a public meeting on October 18, 2006 at the University of New Orleans. The public meeting included an open house where stakeholder groups were offered display space to present their plans.

More than 150 people attended this public meeting, that also included a formal presentation by the Corps of the study process and its scope followed by an open comment period for public statements from the citizens, organizations, and elected officials present. Public comments made during this meeting were documented and considered in formulating the options for the Interim Report to Congress that was submitted in December 2006.

A public information meeting held May 19, 2007 at Nunez Community College in Chalmette offered those in attendance an opportunity to view a series of posters on the study presented by the Corps. In addition, various stakeholders displayed information and interacted with those who attended. An audience of more than a 100 listened to a formal presentation of the alternatives evaluated in detail and the resulting Recommended Plan. They were made aware of the study schedule and process. Following the presentation they were given the opportunity to ask questions.

Through this collaborative planning process some consensus measures emerged that were supported by many of the stakeholders. However, the stakeholders could not unanimously agree on a plan to close or de-authorize the channel. Stakeholder recommendations varied from total closure to a sector gate allowing passage of vessels with a draft of up to 28 feet. Yet, many of the specific measures in the stakeholder plans were incorporated into the Interim Report. Collaborative planning continued with the stakeholders after the submittal of the Interim Report and it continues as a key component of the preparation of the Final Report.

#### Belief and concerns versus reality

A popular belief is that the inland reach of the MRGO exacerbates storm surge in the region and therefore the MRGO was the cause of the flooding in both St. Bernard and Orleans Parishes during Hurricanes Betsy and Katrina. However, several studies described herein indicate that this popular belief is not true.

A 1966 study (Bretschneider and Collins, 1966) examined 6 different storm scenarios using one-dimensional numerical modeling, and concluded that Hurricane Betsy, that occurred in 1965 during the construction of the MRGO, would have produced the same storm surge elevations with or without the existence of the MRGO.

A 2003 study using two-dimensional Advanced Circulation (ADCIRC) modeling for storm surge (USACE 2003) examined 9 different hurricane landfall scenarios. They were modeled with and without the MRGO but with a shallow marsh in its place. The models demonstrated that the maximum difference in storm surge with and without the MRGO was just over 6 inches.

Following Hurricane Katrina, the Interagency Performance Evaluation Task Force (IPET) studied the New Orleans hurricane protection systems, storm surge, performance of flood protection measures, and the consequences of the hurricane (USACE 2006a and USACE 2006b). The IPET found that the MRGO had little influence on flooding in St. Bernard Parish during Hurricane Katrina. This was because when the marshes that surround the MRGO are inundated, the water conveyed through MRGO channel is a relatively small part of the total.

The IPET Report states "...during Katrina, the MRGO was far from the *hurricane highway* moniker with which it has been branded." The IPET Report found that high surge and high, long-period waves overtopped the MRGO levees well before the hurricane made landfall, and that the high velocities of water moving over the levees caused scouring and breaching of levees along the MRGO.

In 2006, the Corps analyzed the Southeast Louisiana Hurricane Protection System and found that "...[t]he southeast trending leg of the Mississippi River Gulf Outlet (MRGO) had little influence on the water levels in the IHNC during Katrina" (USACE 2006a). This conclusion was reached after comparing the results of ADCIRC models, assuming first that the MRGO channel existed in its pre-Katrina condition, and then

assuming that the MRGO channel did not exist.

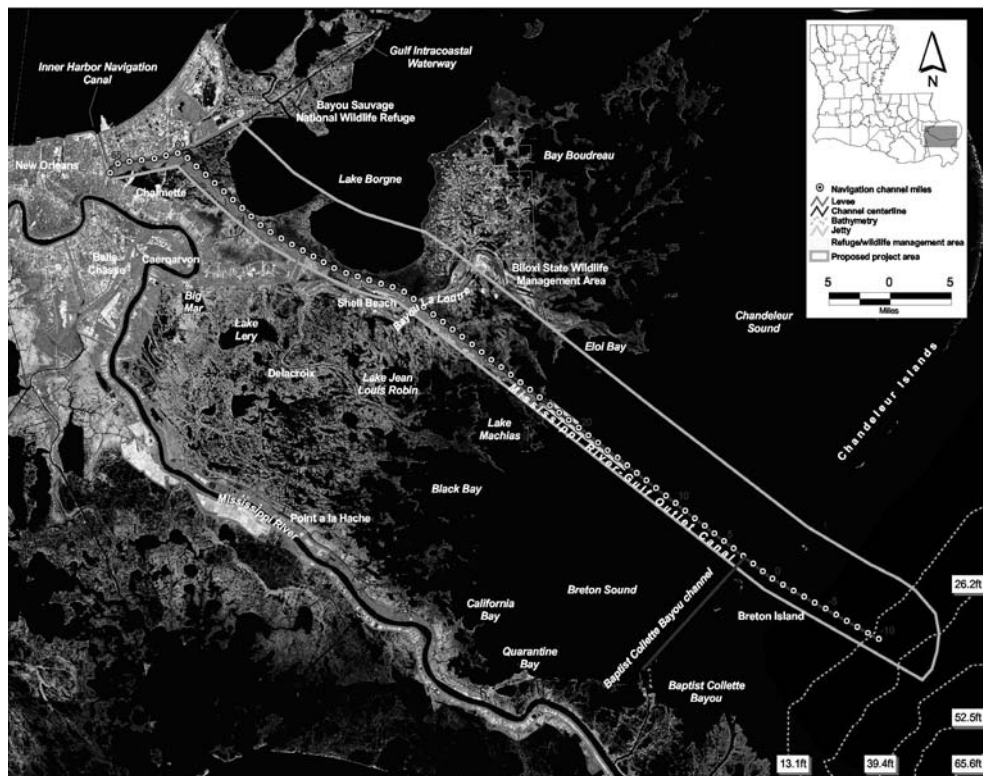
A 2006 study by the Louisiana Department of Natural Resources also evaluated the impact of the MRGO on storm surge using ADCIRC modeling. This study considered 7 different scenarios. The conclusions were that the MRGO channel does not contribute significantly to peak storm surge where the surrounding wetland system is overwhelmed with water during severe storms, and its closure will not provide significant, direct mitigation of severe hurricane storm surge. However, closure of the MRGO may, according to the study, modestly delay the onset of storm surge in a few locations and "...would significantly reduce storm surge scour velocities at some locations" (LDNR 2006).

Studies also demonstrated that the most noticeable effect of the MRGO occurs for small surge events, where the marsh areas are not completely inundated (USACE 2006b; LDNR 2006).

As part of another Corps investigation, the Louisiana Coastal Protection and Restoration Plan (USACE 2006c), further storm surge modeling analyses are underway to consider scenarios with new structural flood protection features, such as levees and floodgates. Notwithstanding the conclusions reached by the various studies, barrier construction such as floodgates at some points along the MRGO, or partially or completely filling in the channel has been part of the public discourse as the solution to its concerns about storm surge.

#### Alternatives considered

A broad suite of alternatives were identified for development of the deep-draft deauthorization plan in the Interim Report. They covered a range of possible actions including re-filling the



Map showing the Mississippi River Gulf Outlet Canal and vicinity.

entire channel, building navigation gates, or abandoning the channel.

All of the alternatives identified in the Interim Report that included continuing maintenance of the MRGO channel for shallow-draft navigation were eliminated because their projected economic return is negative. This means that the cost to continue to maintain the channel is much higher than the value of the projected commerce it would generate.

Refilling the entire MRGO channel was eliminated as an alternative because of the cost. It is roughly estimated that it will require 250-350 million cubic yards of dredged material to fill the inland reach of the channel at a cost of \$2.8 billion based on October 2006 prices. This material could possibly be mined from the Ocean Dredged Material Disposal Site. Such a fill operation is estimated to take between 15 and 44 years.

Other alternatives were suggested after the release of the Interim Report. They included multiple closures, limited channel filling, bank restoration, and tree planting. Most of these suggestions were evaluated and eliminated based on a detailed assessment of their cost, impact, and effectiveness. Planting trees and other vegetation was also eliminated because of concerns about potential adverse impacts to levee performance during storms.

Three alternatives were developed and considered for detailed evaluation. They are

- *Alternative 1:* Construction of a total closure structure across the MRGO channel near Bayou La Loutre immediately.
- *Alternative 2:* Phased construction of a total closure structure across the MRGO channel near Bayou La Loutre.
- *Alternative 3:* Cease all MRGO operations and maintenance dredging activities immediately.

The phased construction of a total closure structure across the MRGO at Bayou La Loutre to temporarily allow the passage of shallow-draft vessels provided by Alternative 2 requires a higher total project construction cost than Alternative 1 and involves a longer total construction time. The economic information available indicates that shallow-draft traffic on the MRGO between the GIWW and the Gulf is not economically justified in terms of National Economic Development (NED) because the net economic benefit is negative. Therefore, compared to Alternative 1, Alternative 2 is not justified and it was not carried forward for further evaluation and comparison.

#### Recommended Plan

The immediate construction of a total closure structure across the MRGO channel at Bayou La Loutre provided by Alternative 1 was adopted as part of the Recommended Plan. It addresses the study authority as described in Public Law 109-234 and presents a comprehensive plan to de-authorize all navigation on the MRGO channel from the GIWW to the Gulf. Under the Plan, the MRGO channel from mile 60 at the southern bank of the GIWW to the Gulf would be de-authorized for all navigation use.

The MRGO channel (mile 66 – 60), the Michoud Canal Project, and the IHNC Lock Replacement Project will remain authorized.

As part of the Plan, a total closure structure would be constructed of quarry stone at the south ridge of Bayou La Loutre in St. Bernard Parish. The proposed structure will connect the two sides of the ridge spanning a distance of approximately 950 feet with approximately 392,000 tons of stone placed by a barge-mounted dragline. Quarry run stone will be used to increase the fine material content to reduce voids and minimize water exchange.

The top of the proposed total closure structure would be 12 feet wide at elevation + 7 feet NGVD 88 (National Geodetic Vertical Datum). With side slopes of 2:1, its estimated bottom width would be 450 feet. Every effort will be made to construct the closure during a May through September window when the Gulf sturgeon — a threatened fish species — are in the area rivers and not the estuaries.

The federal government would construct the total closure structure. The existing bank stabilization features and jetties along the MRGO would be de-authorized but remain in place. A non-federal sponsor, likely the Louisiana Coastal Protection and Restoration Authority, will be required to acquire any real estate necessary to implement the Recommended Plan and for the long-term operation and maintenance (O&M) of the total closure structure.

The construction costs of the total closure structure (excluding real estate) will be 100% federal and its ongoing O&M costs will be 100% non-federal sponsor. The estimated total project construction cost of the total closure structure is \$24.6 million based on October 2006 prices. Total average annual costs for the Recommended Plan — including O&M costs and the costs to navigation — are estimated to be \$5.1 million. The total average annual benefits are estimated to be \$12.5 million. The estimated total average annual net benefit is then \$7.4 million.

#### Conclusion

The Corps is scheduled to submit the Final Report on the de-authorization of the MRGO in December 2007. A plan for the MRGO has been developed through the collaborative involvement of the many stakeholder parties. They often did not mutually agree in the debates about the economy or the environment. The Corps attempted to balance their competing interests and apply them where possible. Several significant stakeholder recommendations that involved the continued maintenance and operation the MRGO navigation project were eliminated for lack of economic justification.

To proceed with the proposed construction project, the Corps must receive authorization and funding that originates in the Congress and is signed into law by the President of the United States. This process normally involves local officials requesting the project — usually with shared funding — from the federal government. Further, local sponsorship of a project is required through a signed cooperation and cost-sharing agreement. If the project is approved, the Congress then authorizes the construction and provides the funding needed to proceed.

If the Congress acts to pass the plan and the funds are provided, the Corps will be tasked to build the total closure structure on the MRGO. In addition, it is expected that more coastal restoration work and levee construction will occur in the vicinity of the project all aimed at reducing the risk of flooding to the communities in southeast Louisiana. For additional information on the MRGO project and the closure study please visit <http://mrgo.usace.army.mil>.

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## - Observation -

Engineering: I was recently reminded of the pervasive nature, and the resulting ubiquity, of engineering in the modern world through the cogent words of a writer who's identity I failed to note. It was noted that there are few facilities or products in the modern world that do not have an engineer's finger prints all over their creation and production. The important notion that followed this observation is an additional and equally important observation that also breaks no new perceptual ground. The resulting high rate of success and advancement of engineered facilities and products that have been experienced worldwide are a result of engineers astutely assimilating scientific, social and economic advancements and the lessons from the definitive failures that have occurred in their collective experience. It would appear that both phenomena are each an outgrowth of the other. If nothing else, it is an important reminder for me about who, what and where we are as a profession. - Editor



# Branch News and Leadership Forum

## BATON ROUGE

By Robert W. Jacobsen, PE, President

The Branch held a joint luncheon meeting with the Baton Rouge Chapter of the Louisiana Engineering Society in conjunction with its September general membership meeting. The featured speaker was Baton Rouge Mayor, Kip Holden. He discussed Baton Rouge's post-Katrina growth and particularly the progress on the road improvements and the proposed Baton Rouge loop project.

The Branch's officers for the 2007-2008 administrative year were installed during the September general membership meeting. During this event, special recognition was paid to outgoing Branch President, Brant Richard, for his years of outstanding service to the Branch through his leadership on the Branch Board of Directors. The members of the Branch Board of Directors for the 2007-2008 administrative year are

- Robert W. Jacobsen, PE, President
- William H. Wall, PE, President Elect
- Jeffrey L. Duplantis, PE, Vice President
- Adam M. Smith, EI, Secretary-Treasurer

- Clinton S. Willson, PE, Director-Education
- Rudolph A. Simoneaux, III, EI, Director-Programs
- Samantha E. Miller, EI, Director-Membership and
- Brant B. Richard, PE, Past President.

### October general membership meeting

An upcoming event is the Branch general membership meeting and luncheon scheduled for October 18th. It is scheduled to be held on the LSU Campus in the Germano Center located in the CEBA (Civil Engineering and Business Administration) building that was recently renamed Patrick F. Taylor Hall. A multifaceted program is planned for this meeting.

A representative from the Department of Civil and Environmental Engineering will update Branch members on the Coastal Engineering advanced degree program and the Department's recent recognition by the University as one of its 11 departments designated as *Foundations of Excellence*. They are the

"...programs on which students and faculty are building to make the University a leading center of learning and research..." The selection reflects the Department's strength and its potential to advance to a level that commands national attention and heightening LSU's reputation. It is anticipated that the University will make the Department a top investment priority to aid in achieving this potential.

Branch members present will also have the opportunity to hear a progress report from the LSU ASCE Student Chapter that will be hosting the meeting of the Deep South Conference of ASCE student chapters this Spring. Also, Barry Erwin President and CEO of the Council for a Better Louisiana (CABL) will speak on the topic "Election 2007: A New Direction for Louisiana?" CABL ([www.cabl.org](http://www.cabl.org)) is self-described as "a nonpartisan statewide organization working in the public interest to focus attention on issues most important to moving Louisiana forward."



Robert Jacobsen



William Wall



Jeffrey Duplantis



Adam Smith



Brant Richard



Clinton Willson



Rudolph Simoneaux



Samantha Miller



## ACADIANA

By Joseph P. Kolwe, Jr., PE, President

In conjunction with the Lafayette Consolidated Government review of the proposed FEMA flood maps for the region, its review committee requested the Branch to nominate 3 representatives to assist with the review. **Dale W. LeBlanc**, PE, of Dubroc Engineering, Inc., **Paul L. Miers**, PE, PLS, of Paul L. Miers Engineering, LLC, and **Brian M. Ronkartz**, PE, PLS, of Ronkartz-Oestricher, APEC, were nominated by the Branch to serve on the committee. The potential issues on which these ASCE representatives will be working with the LCG and fel-

low committee members are assessments of the potential impacts of the proposed flood maps on both the public and the practice of engineering. Upon completion of the review, the findings and recommendations of the LCG will be submitted to the U.S. Army Corps of Engineers for its final review and implementation of the flood maps.

Regarding other Branch news, we have an exciting and eventful year planned. For starters, we have recently elected and installed the Branch Board of Directors. Along with the continuing members on the Board, there are 2 new members

— **Shaun R. Simon**, PE, and **Luke Hebert**, EI. Shaun is a Geotechnical Engineer employed by Eustis Engineering and Luke is an Engineer Intern employed by C. H. Fenstermaker & Associates.

The members of Branch Board of Directors for the 2007-2008 administrative year are

- Joseph P. Kolwe, Jr., PE, President
- Clint S. McDowell, PE, , President-Elect
- Joushua P. Stutes, PE, Vice President

(Continued on Page 12)



Joseph Kolwe



Clint McDowell



Joshua Stutes

## SHREVEPORT

By Rusty L. Cooper, EI, President

The Branch kicked off the new administrative year with its first general membership meeting scheduled in October. Though a number of engineers were fulfilling their ethics PDH requirement that was being offered during another concurrent society meeting, the Branch still experienced a good turnout for a very interesting technical presentation. Jim Dow, CEO of Aerotec, LLC, based in Bessemer, Alabama

made a presentation on LIDAR (light detecting and ranging) data modeling. We appreciate Jim making the long trip to make this presentation during our branch meeting.

Also during the October Branch general membership meeting the newly elected Branch officers were formally installed into their respective offices. I wish to thank former Branch and Section president, Barbara E. Featherston, PE,

for conducting the installation ceremony. The members of the 2007-2008 Branch Board of Directors installed were

- Rusty L. Cooper, EI, President
- J. Daniel Thompson, EI, Treasurer
- Eric T. McClanahan, EI, Secretary
- Elba U. Hamilton, EI, Past President

(Continued on Page 12)



Rusty Cooper



Eric McClanahan



Daniel Thompson



Elba Hamilton

## NEW ORLEANS

By Ronald L. Schumann, Jr., PE, President

### What's normal?

The Branch is entering its third year — *Post Katrina*. The past 2 years have been a challenging and difficult experience for our Branch just as it has been for the Greater New Orleans community as a whole. The civil engineering community has also faced new and difficult challenges with regard to rebuilding the area's infrastructure and specifically the hurricane protection system. We can be proud that as civil engineers we have had the opportunity to dedicate our time, talents and knowledge to the rebuilding and improved protection of our great city.

The Branch through the dedication and service of its volunteer leadership — officers and committee members — during this time of trial has kept operating effectively and on sound financial footing. I believe that all of us in the Branch owe our leaders who have managed our programs and member services over the past 3 years a huge debt of gratitude. Their service was provided at a time in the early recovery when we all experienced the same heaviest of demands on our time and energy from the additional work required in our jobs and in our every day lives.

We still need additional aid from Branch members who may be able and willing to volun-

teer to assist with the various organizational needs of the Branch including the committee functions and programs that the Branch regularly supports. Some Branch Board members are still serving in multiple duties to effectively cover the important programs and services offered. The involvement of more Branch members will not only reduce the individual burdens but present opportunities to improve programs and services by what new eyes can uniquely bring to the table. Please feel free contact me or any member of the Board if you are interested in being of service.

The Branch is in the process of updating the contact information on the website. The website address was changed last year to [www.asce-neworleans.org](http://www.asce-neworleans.org). As we enter this new administrative year, the Branch leadership is looking forward to returning to a more regular schedule of meetings and events. This could be thought of as returning to *normal*, but as we who have been through the ordeal of recovery can appreciate it will be a *new normal* — Post Katrina.

### The Show

The Louisiana Civil Engineering Conference and Show was held September 13-14, 2007 at the

Pontchartrain Center in Kenner. It is the annual event jointly sponsored by the Branch and the Louisiana Chapter of the American Concrete Institute. A few years ago the Branch and the ACI Chapter agreed to manage the planning and production of the Louisiana Civil Engineering Conference and Show through a separate organization with the members from both organizations volunteering to serve on its steering committee and other positions.

This event has not skipped a beat. This year's conference was a great success with the attendance and exhibitors either approaching or exceeding the record numbers experienced in previous years. This demonstrates how important this conference is to our civil engineering community. I believe that the principal reasons for its importance are

- It provides an opportunity for the local civil engineering community to come together to exchange information and ideas, and network.
- It provides an opportunity for the local civil engineering community to earn the professional development hours required to maintain their engineering licenses.
- It provides a major part of the Branch oper-



Ronald Schumann



Nathan Junius



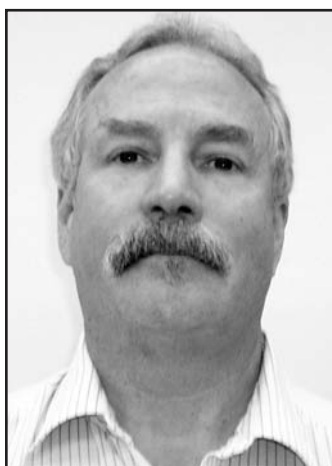
Benjamin Cody



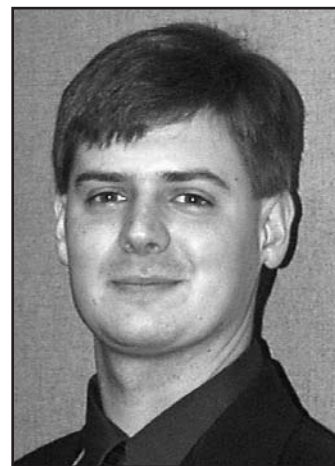
Margaret Adams



Malay Ghose Hajra



Reid Dennis



Christopher Sanchez



ating revenues for its other programs and member services.  
Kudos for a job well done to all of those who volunteered to produce this event.

#### Public service and trust

A meeting was held in Metairie consisting of representatives from the ASCE and of two local organizations — Levees.org and the Lake Pontchartrain Foundation. I was asked to attend as the representative of the Section and the Branch. The representatives from the national ASCE who attended were

- William F. Marcuson, III, President
- Lawrence H. Roth, Deputy Executive Director and
- Charles V. (Casey) Dinges, IV, Managing Director of External Affairs

This meeting was in response to a request from a number of our members. It concerned a news release about an ASCE External Review Panel report on its review of the performance assessment of the New Orleans Hurricane Protection System conducted by the U.S. Army Corps of Engineers Interagency Performance

Evaluation Taskforce. As an outcome of this meeting, I would like to highlight a number of issues that rose to the surface for me.

First, as civil engineers *our most important duty is to the safety, health and welfare of the public*. The first canon of the ASCE code of ethics states that "Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties."

Second, as engineers *we have a responsibility to educate the public* regarding engineering issues so they can be wiser consumers of engineering services and more trusting beneficiaries of the engineered infrastructure. One guideline from the third canon of the ASCE code of ethics states "Engineers should endeavor to extend the public knowledge of engineering and sustainable development, and shall not participate in the dissemination of untrue, unfair or exaggerated statements regarding engineering."

Third, as the major civil engineering professional organization in the Greater New Orleans area, *the Branch has been called to the role of*

*being trusted eyes and ears for our community*. We need to respond to this invitation by becoming an active voice in our community supporting competent flood protection and coastal restoration concepts and projects. I challenge our members to share their ideas with the Board on the best ways that we can become more visible and effective as advocates for the public welfare relative to the engineering issues in our area.

#### New leadership

The members of the Branch Board of Directors for the 2007-2008 administrative year were installed during the Section Annual Meeting hosted by the Branch in New Orleans September 14. They are

- Ronald L. Schumann, Jr., PE, President
- Nathan J. Junius, PE, President-Elect
- Benjamin M. (Ben) Cody, PE, Vice President
- Johann L. Palacios, PE, Treasurer
- Margaret S. (Meg) Adams, PE, Secretary
- Malay Ghose Hajra, PhD, PE, Director
- Reid L. Dennis, PE, Director and
- Christopher L. Sanchez, PE, Past President.

## ASCE-SEI New Orleans Chapter

By Om P. Dixit, PE

As another administrative year passes and the Chapter Executive Committee has appointed its leadership for the for the 2007-2008 year. They are

- Mahboob A. (Mike) Choudhry, PE, Chair
- Jayant S. (Jay) Jani, PE, Vice Chair
- James R. Danner, Jr., PE, Treasurer and
- Om P. Dixit, PE, Newsletter Editor.

Considering the success and content of the geotechnical seminar in August, the Executive Committee has decided to arrange for seminars to provide the much needed discussion about the issues that surfaced concerning project management and ethics. The Committee is seeking good topics and speakers for future seminars.

Members with expertise in these areas are welcome to join the Committee. To provide suggestions to — or request membership on — the Executive Committee please contact Mike Choudhry at [Mike.Choudhry@URSCorp.com](mailto:Mike.Choudhry@URSCorp.com).

All seminars are held on the University of New Orleans campus. Seminar dates, pertinent information, and registration can be found on the New Orleans Branch website at [www.asce-neworleans.org](http://www.asce-neworleans.org). To add your name to the Chapter's mailing list, email Om Dixit at [om@fenstermaker.com](mailto:om@fenstermaker.com).

#### Seminars hosted

Since the last report made in the August issue of this journal, the Chapter has hosted the

following seminars:

*What should structural engineers know about a geotechnical report?* (August 9, 2007) Presented by William W. Gwyn, PE, Eustis Engineering and David E. Lourie, PE, Lourie Consultants

There were approximately 75 people in attendance. It was stressed that subsurface conditions are a common cause for construction delays, cost overruns, claims and disputes, and that geotechnical reports can contain much of the information that could solve and possibly avoid these problems if effectively used. The presenters recommended a meeting between the design engineers and the geotechnical consultant prior

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From the left are Om Dixit, David Lourie, Bill Gwyn and Jim Danner pictured following the presentation "What should structural engineers know about a geotechnical report?" by Lourie and Gwyn.



Audience attending the presentation "What should structural engineers know about a geotechnical report?" on the University of New Orleans campus.

# STUDENT CHAPTER NEWS

## University of Louisiana at Lafayette

By Amy Henschke, Secretary

The Chapter began the fall semester by sponsoring its annual Fall barbecue September 12 in Girard Park adjacent to the campus. This social event allows all of the civil engineering students the opportunity to meet fellow classmates, and to converse with the civil engineering faculty and practitioners from the Acadiana area who attended.

By hosting this barbecue, the Chapter takes the opportunity to promote the Chapter's activities and encouraged student participation. The significant increase in student attendance over that of the previous year's barbecue is an encouraging sign of support and student interest for the upcoming year.

The Chapter has plans to increase opportunities for the volunteer involvement for Chapter members in community services throughout the school year. The first opportunity planned and scheduled in October is assisting in a Habitat for Humanity project.

Chapter members are currently making preparations to compete in the regional steel bridge, concrete canoe, surveying, and student paper competitions to be held during the 2008

Deep South Conference. Some local ASCE practitioner members have volunteered to advise

Chapter members on both design calculations and project construction techniques.



Student Chapter officers attending the annual Fall barbecue sponsored by the Chapter from the left are Divina Lanclos, Michael Ronkartz, Amy Henschke, Chris Giglio, Debra Hunter, Jacob Vollmer, Jacob Whitmore and William Cenac.

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- Shaun R. Simon, PE, Treasurer
- Luke Hebert, EI, Secretary and
- M. Jamal Khattak, PE, Past President.

In addition to the regular monthly general membership meetings and luncheons, the Branch will also be hosting the 2008 ASCE - Section Annual Spring Meeting and Conference. While the details of the Conference are still being developed, it appears at this time the Conference

will be scheduled in early April.

In an attempt to make sure the Conference has broad appeal, we are open to and wish to hereby invite subject suggestions for the technical sessions. We would also like to extend in the call for speakers an invitation to all who may be interested in making a presentation. Further, if you have any ideas for subjects and/or speakers or you would like to volunteer as a speaker,

please contact me at 337-232-3336, or contact any Branch Board member. Current information regarding the Conference will be posted and updated on the Branch website as it becomes available and it will be published with the Conference announcement in the next issue of the this journal.

(Continued from Page 9)

I look forward to serving with my fellow Board members this administrative year.

I had the honor of recognizing Branch Past President, Elba Hamilton during the October general membership meeting for her exceptional service and leadership in the Branch during her tenure on the Branch Board of Directors. I also presented her with the plaque commemorating her past service as President of the Branch. Elba is and will continue to be a great asset to the Branch.

Also in October, the Branch held a special evening reception to honor Dr. Bobby E. Price, PE, recognizing his recent election to the status of Honorary Member in the ASCE. The reception took place in Ruston on the Louisiana Tech University campus. I want to thank Daniel Thompson for organizing this event. I was unable to attend due to a previous engagement — the PE exam. I also wish to thank Elba Hamilton

for her aid in planning this event.

The Branch leadership is continually seeking ways to promote our profession, give back to the community and be of service to our members. We will be continuing our tradition of helping out with canned food collection and donation to be given to the Providence House this November.

### Death notice

Services were held October 6, 2007 celebrating the life of Enoch Joseph "EJ" French, PE, at Broadmoor Baptist Church in Shreveport. French passed away peacefully on Tuesday, October 2, 2007 at the age of 77. He graduated from Louisiana Tech University in 1951 with a degree in civil engineering. French was a licensed civil engineer and worked most of his career as a professional engineer and land surveyor for the City of Shreveport. French enlisted in the Army in 1954 and served in the

Vicksburg District of the U.S. Army Corps of Engineers for 2 years. Upon returning to Shreveport, he continued his service with the City where he advanced to the position of Director of Public Works. French retired from the City in 1985 after 33 years of service and continued working as a professional engineer and land surveyor until his death.

### Did you know...

...that paper-based archiving of text has a life expectancy of 500 years while the archiving of digitally created files may have a life expectancy of only 5 years? This is a result of the built in obsolescence of digital technology through rapidly evolving computer media, languages and operating systems.



## Section News and Information

### *Highlights of the August Board of Directors meeting*

A strategic plan for the Section to be established during the 2007-2008 administrative year was discussed as part of the old business and the new business on the agenda. There was an extensive discussion about the historical operations of the Board and their resulting effectiveness. A particular concern was the original purpose and intended function of the 4 Directors-at-Large noting that they were originally added to the Board to serve as Section committee chairs and thereby giving them a voting membership on the Board related to the programs for which they may be responsible.

Historically, the 4 Directors-at-Large on the Board have not been assigned committee chairs and they have not been typically assigned any specific responsibilities. The resulting lack of attendance during Board meetings and participation in Board deliberations raised the question of why should these positions be continued. It appears from recent experience that the remainder of the Board is sufficient in size to easily transact the Section's current business. On this basis, without specific assignments and stated expectations, the Director-at-Large positions on the Board could be eliminated. An alternative and effective way for committee chairs to gain voting access to the Board is through the well established means of individual Board members accepting the responsibility to be champions for each of the various committees appointed.

The intention to develop and use a strategic plan to formally identify the vision and mission for the Section and to establish goals and resulting priorities and programs was discussed in depth. The intended result of the proposed strategic planning — the priorities and programs — is to provide specific programs and obligations for the committees. By stating the priorities and programs at the Board level with the branch presidents participating, the Section and branches will be in the position to establish a division of labor between the Section and branch administrations.

It was appreciated and discussed at length that most of the Section's past programs that were successfully implemented often require more than one administrative year to bring to fruition once they are identified by the Board. Past experience indicates that several successful program implementations were the direct result of an incoming Section President/Board accepting and continuing the implementation of an ongoing program that was started by the previous administration. On this basis, it may be reasonable that the executive leadership of the Board — the President-Elect, the President and the Past President — should combine their commitments, resources and particularly their ongoing 3-year tenure to provide the needed continuity in leading successful programs as they are identified and pursued.

A tentative annual Section budget for the 2007-2008 administrative year was briefly reviewed showing an initial estimated income of \$41,100 and estimated expenses of \$49,500. The imbalance in the budget reflects the generous budgeting of program expenses that are made available but that are seldom totally expended. Prior to consideration for adoption, there will be several revisions made to the expense side of the Section budget and a realignment of several expense items that have categorically evolved since they were first incorporated.

The budgeting concerns that delayed previously proposed Section scholarship funding was revisited. There was opposition to funding the proposed scholarships based on an uncertainty of the risk of exceeding the 2006-2007 annual budget. It was noted that the anticipated and usual over budgeting of expenses in the annual Section budget would have allowed for the proposed scholarship expenditure with the actual total expenses not exceeding the actual income.

Section journal editor, James C. Porter, PE, announced his intention to discontinue as its editor by the end of the 2007-2008 administrative year. This early announcement is to give the

Board the opportunity to decide the future of the Section journal. Porter expressed a willingness to accommodate a new editor in any way that would expedite an effective transfer of the duties.

A search for — and appointment of — a new editor or the return to the President-Elect serving as the editor and the Chair of the Publications Committee are options to consider as is ceasing the Section journal and a printed publication and making it an e-newsletter through the recently developed Section website and the use of mass email. Another printed alternate that was previously discussed was making the journal a component of the *Louisiana Engineer and Surveyor Journal* published by the Louisiana Engineering Society. It also serves as the journal of the Louisiana Professional Engineering and Land Surveying Board.

The announcement of the pending change of the Section journal editor comes at a time when the journal's printer/publisher announced that it is repositioning itself in the Baton Rouge market where its prepress services that have been historically operated at a loss are being reduced or possibly phased out. It was recommended that the expected increase in the associated costs for prepress services may actually be competitive in the Baton Rouge market considering there was a substantial difference in the printer/publisher's cost and the next highest estimate when the competing costs were previously solicited.

It was recommended that some delay in pursuing a new printer/publisher may be appropriate until a decision concerning the future of the journal is made in the event that the next editor is not from Baton Rouge. It is recognized from experience that it was very difficult for an editor to work long distance with the printer/publisher in the prepress process. This problem today should depend more on the business practices of the printer/publisher and the ability of the editor because technologically it should be a much less serious problem than originally experienced more than 10 years ago.

### *Highlights of the September Board of Directors meeting*

A plan was revealed to establish a special committee consisting of the Section's 4 Directors-at-Large and some past Section presidents to develop a strategic plan for the Section. The intention is to develop a vision, mission, goals and programs to enhance the direction and the performance of the Section and its branches in service to its members.

It was proposed that the Section Operating Guide be updated since it is long over due to be updated. The Guide documents the Section's operating organization, procedures and processes. It is intended to support and sustain the Section's corporate memory and reasonably guarantee the effective continuity of the Section's executive functions. A volunteer for

this service will be sought and identified.

It was observed that the financial status of the Section and the branches appears to be very good. There was concern expressed that there appears to be substantial excess funds that are accumulating inappropriately. Opportunities to expend these reserves on plans and programs such as those to enhance professional growth in the civil engineering community, improve participation in ASCE activities and encourage membership development should be explored and expedited.

Section President, E.R. (Ray) DesOrmeaux, PE, expressed a personal goal during his term in office. He plans to attend a branch membership meeting in each of the 4 branches.

There was an extensive discussion about branch newsletters that are generally a significant expense to print and publish. It was observed that the branches are not obligated to send meeting notices and newsletters to ASCE members who are not *subscribing* (dues-paying) members of the Section. However, it can be an important service to the broader civil engineering community to share with the *assigned* (non-dues-paying) Section members the news of opportunities and activities that may encourage their future membership and participation in the Section and its branches.

The branches appear to have different

(Continued on Page 15)

## Section recognizes members

Based on a selection from branch nominations made by the Section's Special Activities and Awards Committee that was recommended to — and approved by — the Section Board of Directors the following Section members were recognized and honored during the Section Annual Meeting in New Orleans September 14, 2007:

- **C. Eric Hudson**, PE, Outstanding Young Civil Engineer
- **Mark W. Snow**, PE, Outstanding Civil Engineer
- **Joe E. (Butch) Ford, Jr.**, PE, Outstanding Government Civil Engineer
- **Jerome M. (Jerry) Klier**, PE, Lifetime Achievement
- **Bobby E. Price**, PE, Wall of Fame and
- **James C. Porter**, PE, Wall of Fame.

The Section through its awards program annually recognizes its members who by example are considered outstanding by their peers in their careers and service to the profession and their communities. The program has evolved over the years to include the following awards:

- Wall of Fame
- Educator of the Year
- Lifetime Achievement
- Outstanding Young Civil Engineer

- Outstanding Civil Engineer
- Outstanding Young Government Civil Engineer
- Outstanding Government Civil Engineer
- Outreach

Each of the four branches in the Section maintain a parallel branch awards program to recognize their outstanding members. Those so recognized may be nominated by their branch for consideration for the same recognition at the section level. For more information about the Section/branch awards program, visit the Louisiana Section website.

## Membership development

Membership development is effectively providing the services and the leadership that satisfy member needs. Effective membership development plays a significant role in attracting new members and satisfying existing members. It promotes and facilitates recruiting and retention. In the case of the ASCE sections and their branches, their members are both providers and customers — *members serving members*. Members apparently seek — and expect to receive — services as customers of the section/branches and the name of the game is *professional development* as far as the services expected and provided.

The section/branch elected and appointed leadership take on the added voluntary role as the trusted providers of member services in close association with their subscribing membership. Through practicing diligent stewardship, leadership and representation in all aspects of governing/serving they can sustain high quality services and the vitality of the organization in a way that best serves the overall professional development

needs of the members. These leaders are, or should be, simply practicing the golden rule — Do unto others as you would have them do unto you.

The membership *business* of a society like the ASCE is truly its life's blood. In the organization, it is usually reduced to the stark terms of recruiting and retention with the hopeful outcome of a net growth in members if both areas are effectively pursued. The only choices some would lead you to believe are available are *growth or death*. Experience would suggest the opposite of growth appears to be more like slow, easily recognized rot from which recovery is possible.

The membership business has similar relationships and outcomes as any other kind of business. Ineffective membership development leads to dissatisfied members, loss of members (customers) and a poor reputation that is very difficult to rectify. The ASCE has many provider-customer relationships with its members. The ASCE appears to be divided into three levels of

general governance

- national
- regional and
- section/branch

and two levels of governance within each of its several relatively new technical institutes

- national and
- local chapter.

Since membership is optional in the ASCE and there are a lot of alternative professional development resources and opportunities available in the market, the ASCE's *governance* may be more associated with identifying and managing the *services* provided and paid for by its members with their dues and fees. In this sense, governing is not actually governing like the federal, state and local governments and most of the nontechnical issues in the ASCE appear to center around who will be served and how.

All of the ASCE's members are then volunteers who are attracted to the ASCE for their own reasons. They seek services to facilitate their professional development and the ASCE seeks members to serve. It is not uncommon for a member to be attracted to and to be served by only one of the several assets the ASCE offers its members. They can be considered the customers and the asset(s) of the ASCE their provider(s).

For a section/branch asset there is a reasonable measure of the ASCE members it serves because section/branch membership is a separate part of the national membership and it is voluntary. Of the total 1857 ASCE members *assigned* to — resident in — the Louisiana Section, there are 1283 excluding the Student Members and Life Members. Of these 1034 or 80 percent *subscribe* to the Section by paying the additional \$20 annual Section dues. This may be reasonably taken to mean that the Section/branches as an asset of the ASCE attracts 1034 subscribing members who are its customers and some also serve in its leadership as their providers.

The Section and the branch leaders recognize that the substance of their programs/processes that support or affect membership development is important because membership development in many ways establishes the vitality of their organizations and the character of their membership. Because of this recognition, the Section and its branch leaders are currently at a cross roads concerning the future substance of membership development.

## - Career Benchmarks -

Section members **Jonathan N. Fox**, PE, **Dain R. Gillen**, PE, **Robert R. Hayes**, PE, **Joshua D. Hays**, PE, **Cullen J. Ledet, III**, PE, **Joseph E. Loomis**, PE, **August W. Martin**, PE, **John F. Schexnayder**, PE, **Adam M. Smith**, PE, **Lei Wei**, PE, and **Christopher M. White**, PE, recently earned their professional engineering license in Louisiana. If you are in contact with any of them, please offer your congratulations on their accomplishment.

Louisiana residents **Riyadh I. Al-Raoush**, PE, **Rasaan J. Bines**, PE, **Mandie T. Bosch**, PE, **Adrian K. Dabkowski**, PE, **Barry D. Fehl**, PE, **Nicholas P. Fruge**, PE, **Haoqiang Fu**, PE, **Donald W. Glenn, III**, PE, **Ryan P. Hebert**, PE, **Terri Jo Hollon**, PE, **Barry J. Kennedy**, PE, **Theresa E. Koutnik**, PE, **Mark A. LeBlanc**, PE, **Xiugang Li**, PE, **Jacob M. Loeske**, PE, **James R. McMenis**, PE, **James B. McReynolds**, PE, **Robert N. Morris**, PE, **James L. Richardson**, PE, **Lisa C. Rodriguez**, PE, **Blake S. Roussel**, PE, **Glenn J. Schexnayder, Jr.**, PE, **Curtis E. Shakotko**, PE, **William C. Stein**, PE, and **Scott S. Stringer**, PE,

recently earned their professional engineering license in Louisiana. They are civil engineers or in a related discipline and they are not members of the ASCE. A copy of this issue of the journal is sent to them as an informal introduction to the Section. If any of them wish to join and/or find out more about the ASCE, they are hereby invited to visit the ASCE national website, <http://www.asce.org>. If you are in contact with any of these engineers, please consider formally introducing them to the Section by inviting them to attend a branch membership meeting as your guest.

*Editor's note: The environmental, structural and architectural engineering disciplines licensed by the Louisiana Professional Engineering and Land Surveying Board may be considered closely related to civil engineering. As of June 2007, the active engineering licenses conferred by the Board were approximately 5054 in civil, 725 in environmental, 87 in structural and 12 in architectural.*



## Section awards fellowship

In August 2007, the Section awarded a Hurricane Relief Fund Fellowship to a University of Louisiana at Lafayette Civil Engineering graduate student **Vertie Louise Jordan**. She is the daughter of Lauris and Carlton Jordan of Opelousas, Louisiana. Vertie graduated from Beau Chene High School in 2002 with a 4.0 GPA and earned her BS as an honor graduate in Civil Engineering from the University of Louisiana at Lafayette in 2006.

During her undergraduate years, Vertie was a member in several student organizations including the student chapters of the Institute of Transportation Engineers and the ASCE often serving in their elected leadership. Participating in National Science Foundation funded organizations, such as the *Louis Stokes Louisiana Alliance for Minority Participants* and the *Ronald McNair Internship Program* that are geared toward increasing the number of minorities with graduate degrees, sparked Vertie's interest in continuing with her graduate studies.

As a graduate student in civil engineering, Vertie is conducting research on 2-lane rural highway horizontal curves in the Lafayette region with University of Louisiana at Lafayette Associate Professor Xiaoduan Sun, PE. After earning her MS degree, she hopes to find employment in the field of transportation engineering. Ultimately, Vertie plans to return to academia with her engineering experience to earn a PhD in Civil Engineering and become a professor.



*The check for the Hurricane Relief Fund Fellowship is presented to University of Louisiana at Lafayette Civil Engineering graduate student Vertie Jordan (center) by E.R. DesOrmeaux (right). Others pictured are from the left CE Professor Xiaoduan Sun, CE Department Head Ken McManis and Dean of the College of Engineering Mark Zappi.*

(Continued from Page 13)

approaches to publishing their newsletters. They include

- Printing and mailing newsletters to all ASCE members in the branch
- Emailing to all ASCE members in the branch and printing and mailing newsletters to the subscribing Section members in the branch.
- Emailing newsletters to all ASCE members in the branch.

The Section journal is mailed to all of the ASCE members in the Section and it includes the *Branch News and Leadership Forum* feature as an additional opportunity for a branch's leadership to provide branch news and a source of leadership to all of the ASCE members in the branch and the Section.

The dates for the 2008 Section Annual Spring Meeting and Conference to be hosted by the Acadiana Branch were discussed. Tentative dates of April 10-11, 2008 were selected. The final selection will be subject to the availability of conference facilities and conflicts with holidays and other events particularly the Deep South Conference of ASCE student chapters being hosted by the LSU ASCE Student Chapter.

An initial discussion concerned a proposal to supplement travel costs for Board members to attend Board meetings. Reimbursements may be prorated according to the distance traveled. They would be paid to all Board members attending a meeting. Members not wishing to accept this

travel cost supplement can donate it back to the ASCE through the Section voluntary fund or dispose of the money in any other way they may deem appropriate. The proposal appeared to arouse ambivalence and some consternation.

The most perplexing aspect of this issue is whether it is at all appropriate. Is not the essence of volunteering the donation of one's time, talent and treasure? How does this square with being compensated to serve? It may be part of the slippery slope that begins with paying for the Board members' meals at a nice restaurant that houses the Board meeting? A motive expressed was to encourage younger ASCE members without the resources to participate in the Section's leadership seemed thin. Is it really a matter of resources or is it a matter of priority? What quality of volunteer service can be expected from an individual that needs just this additional incentive to justify serving?

The Board reviewed the proposed 2007-2008 Section budget in detail as a committee of the whole and continued to follow in the same budgetary direction set by the previous Board. No funds were allocated to expenses items for committees and functions in the budget that have no planned programs, and related or expected expenses. The resulting budget approved by the Board is an \$8,720 deficit budget anticipating \$42,600 in annual revenues and \$51,320 in annual expenses. The Section's cash and savings

reserves that include a \$15,600 balance in its checking account and \$45,200 in certificates of deposit will cover an actual deficit if it occurs.

Surplus Section revenues of \$4,000 are budgeted to be allotted to the branches and an anticipated \$5200 net loss is budgeted for publishing the Section journal. Together, they can explain the estimated budget deficit. In the past few years, the Section journal's expenses and revenues have been from near break-even to showing to a very modest profit. The net loss is due to an anticipated increase in publishing cost (approximately \$3,000 per year) and reduced revenues resulting from a long-term decline in advertisement and listing revenues (an approximately \$2,000 per year loss).

To put this in perspective, before November 1992 — the launching of *The Louisiana Civil Engineer* — the Section newsletter, a significant part of the Section's budgeted expenses, was a typewritten document on 10 to 12 sheets of legal size paper without advertisements or listings and it was mailed first class. In today's dollars it would cost the Section approximately \$17,000 a year compared to the \$15,200 budgeted cost for *The Louisiana Civil Engineer* that is professionally produced. A transformation to a paperless e-newsletter professionally produced journal like *The Louisiana Civil Engineer* but published via the internet would cost the Section approximately \$4,000 a year.

## Section Board of Directors

The Section Board of Directors for the 2007-2008 administrative year was installed during the Annual Meeting hosted by the New Orleans Branch September 14, 2007. The slate of proposed nominees for each of the respective members of the Board subject to election for the 2007-2008 administrative year was submitted during the Section's Annual Spring Meeting that

was part of the Annual Spring Meeting and Conference hosted by the Shreveport Branch March 22-23, 2007. The subscribing Section members present during this meeting adopted the slate of proposed nominees and elected them to their respective offices.

- E.R. DesOrmeaux, PE, President
- Ali M. Mustapha, PE, President-Elect

- Christopher P. Knotts, PE, Vice President
- Patrick J. Landry, PE, Secretary-Treasurer
- Timothy M. Ruppert, PE, Past President
- Christopher G. Humphreys, PE, Director-at-Large

- Dax A. Douet, PE, Director-at-Large

(Continued on Page 17)



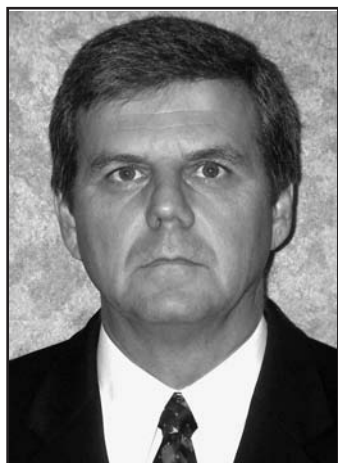
*Ray DesOrmeaux*



*Ali Mustapha*



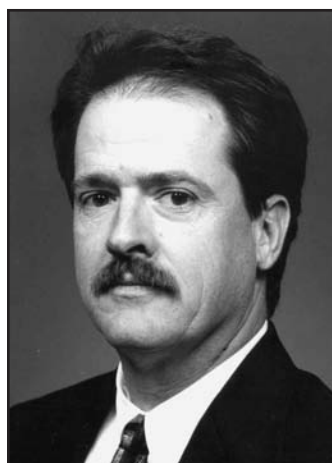
*Christopher Knotts*



*Patrick Landry*



*Timothy Ruppert*



*Christopher Humphreys*



*Dax Douet*



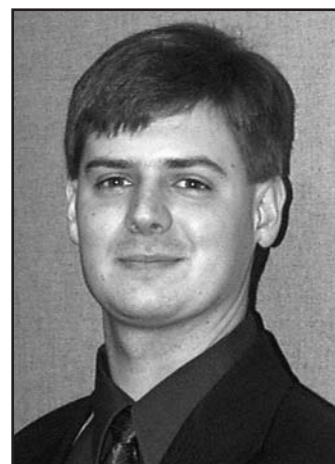
*Eric Hudson*



*Jeffrey Duplantis*



*Luke Lebas*



*Christopher Sanchez*

## ❖ Quotes ❖

*Relationships: How much more about your career did you know the day after you graduated compared to the day before you graduated? The answer to that is a simple "nothing." The current students are our future staff engineers, peers and superiors. True success in your career and your entire life is about building lifelong relationships with other people. Start now by building those relationships when neither of you have anything to gain.*

-Peter More, PE, Chair  
ASCE Committee on Younger Members

*Environment: What is the good of having a nice house without a decent planet to put it on?*

- Henry David Thoreau

(Continued from Page 11)

to the subsurface investigation to discuss the scope of the geotechnical investigations that would be appropriate to reasonably assure a geotechnical investigation and report meaningful to the project.

*An overview of inland marine facility design* (October 4, 2007) Presented by Gilbert J. (Gil) Chatagnier, III, PE, and Joseph E. Jacquat, PE, of Lanier & Associates.

There were approximately 80 people in attendance. A list of the critical site-specific data was presented that must be compiled before any meaningful marine design can be undertaken. Critical design issues such as the factors that dictate the optimal dock elevation for a given site, governing deck loads, environmental loadings and critical geotechnical design issues were reviewed. The salient design features of modern, high capacity energy absorbing fender systems were also discussed.

### Seminars planned

*An introduction to the IBC seismic requirements for Southeast Louisiana* (November 29, 2007) To be presented by Ronald O. Hamburger, SE.

*New developments in prestressed concrete piles* (February 21, 2008) To be presented by Don Theobald, PE, Gulf Coast Pretress, Ocean Springs, MS.

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Section President E.R. DesOrmeaux was not elected but succeeded to the office from the position of President-Elect during the 2006-2007 administrative year. Directors-at-Large, Christopher Humphreys and Dax Douet are continuing to serve the second year of their 2 year term in office. Luke Lebas, the Baton Rouge Branch Assigned Director, was appointed by the Branch to serve the second year of a 2 year term and Christopher Sanchez, the New Orleans Branch Assigned Director was appointed by the Branch to serve a 2 year term.

Also serving on the Board are the appointed

## — Calendar of Events —

<b>November 28-29, 2007</b>	<b>ASCE Seminar * Design of Foundations for Dynamic Loads, Dallas, Texas.</b>
<b>November 28-29, 2007</b>	<b>ASCE Seminar * Design, Construction and Renovation of Masonry Structures, Atlanta, Georgia.</b>
<b>December 4-7, 2007</b>	<b>The National Steel Bridge Alliance 2007 World Steel Bridge Symposium, New Orleans. Visit <a href="http://www.steelbridges.org">http://www.steelbridges.org</a> for more information.</b>
<b>December 6-7, 2007</b>	<b>ASCE Seminar * Wind Loads for Buildings and Other Structures, Atlanta, Georgia.</b>
<b>December 6-7, 2007</b>	<b>ASCE Seminar * Design of Buildings in Coastal Regions, Florida.</b>
<b>December 13-14, 2007</b>	<b>ASCE Seminar * NPDES Stormwater Permit Compliance, Atlanta, Georgia.</b>
<b>December 13-14, 2007</b>	<b>ASCE Seminar * Pumping Systems Design for Civil Engineers, New Orleans.</b>
<b>December 13-14, 2007</b>	<b>ASCE Seminar * Residential Land Development Strategies, Houston, Texas.</b>
<b>December 27-28, 2007</b>	<b>ASCE Seminar * Pumping Systems Design for Civil Engineers, New Orleans.</b>
<b>January 9-11, 2008</b>	<b>ASCE Seminar * HEC-RAS Computer Workshop, Houston, Texas.</b>
<b>January 24-25, 2008</b>	<b>ASCE Seminar * Seismic Design and Performance of Building Structures, New Orleans.</b>
<b>January 24-25, 2008</b>	<b>ASCE Seminar * Structural Condition Assessment of Existing Structures, Houston, Texas.</b>
<b>February 6-8, 2008</b>	<b>ASCE Seminar * Risk Assessment and Management for Buildings and Infrastructure Security, Houston, Texas.</b>
<b>February 7-8, 2008</b>	<b>ASCE Seminar * Low Impact Development, Austin, Texas.</b>
<b>February 27-29, 2008</b>	<b>ASCE Seminar * HEC-RAS Sediment Transport Analysis Using the Hydraulic Engineering Center's River Analysis System, New Orleans.</b>
<b>February 28-29, 2008</b>	<b>ASCE Seminar * Probabilistic Methods in Geotechnical Engineering, Atlanta, Georgia.</b>
<b>March 6-7, 2008</b>	<b>ASCE Seminar * Post Tensioning Construction and Design, Houston, Texas.</b>
<b>March 9-12, 2008</b>	<b>ASCE Conference * Geocongress 2008, New Orleans.</b>
<b>March 13-14, 2008</b>	<b>ASCE Seminar * Structural Design of Residential Buildings Using the 2006 international Residential Code, Atlanta, Georgia.</b>
<b>March 27-28, 2008</b>	<b>ASCE Seminar * Deep Foundations: Design, Construction and Quality Control, New Orleans.</b>
<b>March 27-28, 2008</b>	<b>ASCE Seminar * Steel-Framed Buildings: Practical Issues in Design and Renovation, Atlanta, Georgia.</b>

**\*For more information, call ASCE toll free at (800)548\_2723 or visit the ASCE website: [www.asce.org](http://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.**

members including 4 Branch Directors who are the current Branch Presidents and the 2 assigned branch directors who are appointed by the New Orleans Branch and the Baton Rouge Branch respectively. Those appointed directors are

- Joseph P. Kolwe, Jr., PE, Branch Director
- Robert W. Jacobsen, PE, Branch Director
- Ronald L. Schumann, Jr., PE, Branch Director

- Rusty L. Cooper, EI, Branch Director
- C. Eric Hudson, PE, Director-at-Large
- Jeffrey L. Duplantis, PE, Director-at-Large
- Luke E. Lebas, PE, Assigned Director, and
- Christopher L. Sanchez, PE, Assigned Director



## EDITORIALS

By James C. Porter, PE

### Legacy of engineered works

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Robert Samuelson in his essay titled "Welfare state may stifle growth" published in the *Advocate* - 1/12/06 notes that it is common for countries to embrace the notion that rapid economic growth will cure their ills and that getting rich quicker is now almost a universal craving even though it inspires enormous ambivalence. This ambivalence is especially true in the wealthy, jaded societies where *spurring rapid economic growth is viewed as a morally corrupting, mindless pursuit of materialism that drains life of its spiritual meaning and wrecks the environment*.

Samuelson notes that the anthesis that economic growth is good for the moral character of a country — society — rather than corrupting is advocated by Harvard economist Benjamin Freidman in his book *The Moral Consequences of Economic Growth*.

Economic growth — meaning a rising standard of living for the clear majority of citizens — more often than not fosters greater opportunity, tolerance of diversity, social mobility, commitment to fairness and dedication to democracy...

Freidman avers the opposite is also true that poor growth feeds prejudice, class conflict and anti-democratic tendencies. His antithesis is convincingly pursued by cited historical evidence with international examples of economic conditions and the corresponding social changes that date back into the 19th century. Noted exceptions to his anthesis were acknowledged.

If one makes a sweeping assumption that rapid economic growth would tend to inspire a general sense of plenty that results in a behavior

of generosity and that economic stagnation or decline inspires a general sense of scarcity that results in a sense of selfishness in a society, then the exceptions may be explained. The society experiencing economic stagnation or decline apparently sustained its sense of generosity in spite of poor economic conditions.

Freidman notes that people perceive their economic progress by two benchmarks; their family's past experience and the standard of living of the people around them. Following some of the same responses defined in the *hierarchy of needs* espoused by psychologist A.H. Maslow, economic growth can cure the misery of families below a certain income. But beyond that certain income, economic growth alone rarely creates happiness because happiness mostly depends on family relationships, a sense of belonging, personal beliefs etc.

Samuelson continues to follow his particular thesis that he believes is the real dilemma facing the societies/countries. This is the advancement of a welfare state to where the escalating cost of its entitlements aggravated by demographics may absorb what would otherwise be the resources of rapid economic growth. This would result in an undesirable net economic stagnation or decline — hence misery for many more families.

"What might all of this have to do with engineering?" you ask. It is similar to Samuelson's concern about the legacy of excessive entitlements in a welfare state. These costs would stagnate economic growth. Similarly, lack of stewardship in the engineered infrastructure — an important engine of economic growth

— can result in the absorption of substantial financial resources due to deferred maintenance and inefficient operation. As a result the standard of living that would otherwise be advancing would be caught in the stagnating or declining economy being bled by these inappropriate infrastructure costs.

It is a given that engineers and more particularly the investment in their works provide the *fabric* or the tangible means for spurring economic growth and increasing the standard of living. It is fair to ask, to what extent do engineers and their works may wreck the environment or plunder natural resources? As civil engineers we are all aware of how sensitivity to environmental issues has evolved in the public forum and in our profession. I question if this evolution in our profession is a matter of simply meeting the demands of our environmentally sensitive customers and the environmental regulators or have we been and — much more importantly — are we proactive in inspiring our customers to consider environmentally *friendly* solutions.

More particularly, the historic adverse impact of human activities including engineered works on the environment and on the consumption of natural resources has resulted in the mitigation discipline of environmental engineering, and the widening application of the principles of *green* construction and the related principles of sustainable development. There are parallel developments in other engineering disciplines that have dramatically reduced the impact of engineered works on the environment and the

(Continued on Page 21)

### Everybody does it

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Now here is an ethical principle of practical convenience for surviving in practice. *Everybody does it*. It doesn't hold water ...according to the late columnist Molly Ivins who avered it does not result in acceptable ethical behavior but *convenient* behavior. *Everybody does it*. Would appear to be a form of *situational* ethics or morality that allows one to assess the situation and from the assessment establish a sense of morality or ethics that will guide behavior in the context of the unique situation rather than relying on basic tenets like the ASCE Code of Ethics or the Ten Commandments that are intended to transcend any particular situation.

While basic tenets are intended to transcend any situation, inevitably the individual must recognize that they are applicable and interpret their applicability. The appropriate response to a given ethical or moral dilemma would appear to depend on an innate or a conscious effort on the part of a righteous individual. It would appear to me that given the practical situation where the rubber hits the road — ethically speaking — the major difference is the moral fiber and back-

ground of the individual in the ethical dilemma. The value of moral/ethical tenets is that they provide a consistent moral heading like a compass pointing north. Tenets may have evolved through an ancient history of experience gained through trial and error using situational ethics or spontaneously derived or given through divine inspiration. Tenets may be provided by one's deity, a spiritually inspired law giver, the tradition in a society; deliberative members of a profession. Effective adherence to tenets would therefore imply the individual is a believer of the faith — a follower of some common codified values.

We in Louisiana have witnessed the extensive practice of political patronage and to some extent continue to witness it when exposed. Though patronage was a legitimate government and business practice in the early history of Louisiana, the more recent quid quo pro political favors for political "contributions" is considered public bribery and against the law. As a result, the practice is not as prevalent as it has been. As an ethical matter on a higher plane than the law,

I believe that patronage was never acceptable. But an amoral person practicing situational ethics at one time in Louisiana would find it ethical and engineers were no exception.

Situational ethics or morality as discussed seems a little more problematic since ethical or moral bearing would appear to rely on the observation of the immediate behavior of the crowd or one's peers or significant others. This may be a kind of consensus ethical bearing that is distinctly not founded in codes or tenets but in immediately observed behavior and possibly in consultation with others — an up-to-date opinion poll. History as the previous example would suggest does not look kindly on mob ethics nor do the great religions founded on recorded tenets.

It would appear that how we direct and judge our own ethical behavior as engineers or the lack thereof should not be left to situational ethics or an excuse like *Everybody does it*. If anything, it would appear to be a lame practice and a lame excuse.

...can there be fire?

Under the guise of routine housekeeping for Chapter 8. Professional Engineering and Professional Surveying — LRS 37:681, the Louisiana Professional Engineering and Land Surveying (LAPELS) Board proposed through House Bill 284 to amend the Louisiana Revised Statutes governing the licensure of professional engineers and land surveyors in Louisiana. However, one of the proposed amendments that thankfully failed had nothing to do with housekeeping. Its effect was to ratchet up the inappropriate constraints already imposed on the business practices and relationships of licensees and not "...to safeguard life, health, and property and to promote the public welfare..." the purpose of this body of law. It appeared to be well concealed in the convoluted words of the legislative digest and the proposed revisions to the Statute.

Excerpts from the Legislative Digest for HB 284 attempt to explain

Proposed law changes the definition of "responsible charge" to mean the licensee's direct control and personal supervision of engineering or land surveying service or work, as the case may be, performed by the licensee, by the licensee's bona fide employee, or by another licensee. Proposed law retains present law but requires that persons performing subprofessional work be bona fide employees of licensees in order to avoid licensing requirements of present law. Present law provides that present law shall not be construed to prevent or to affect engaging in engineering as an employee under the responsible charge of a profes-

sional engineer or engaging in land surveying as an employee under the responsible charge of a professional land surveyor.

The original version of House Bill 284 — if it had passed — would have modified and added the offending language to LRS 37:682 Definitions that is part of Chapter 8. Professional Engineering and Professional Surveying. The modifications of concern here are underlined for emphasis.

LRS 37:682(3) "Bona fide employee" shall mean an individual in the service of a licensee under a contract of hire, expressed or implied, oral or written, where the licensee has the power to the right to control and direct the individual in the material details of how the work is to be performed and the licensee pays wages or a salary directly to the individual, pays a share of the individual's social security and federal unemployment tax, withholds federal income tax and the individual's share of social security payments, provides training, furnishes tools and materials and sets hours of work. Generally, such individuals work full time for the licensee, perform work at locations assigned by the licensee, and do not offer their services to the general public.

and

LRS 37:682(15) "Responsible charge" shall mean the licensee's direct control and personal supervision of engineering or land surveying service or work, as the case may be, performed by the licensee, by the licensee's bona fide employee, or by another licensee.

These same apparent concerns of the LAPELS Board in the past led to a successful rules making initiative for plan stamping that inappropriately constrained the practice of engineering. The failed initiative appears to center around *responsible charge*, another statutorily defined term. It goes beyond the *control* engineers must exercise over the products of the practice of engineering regulated by the plan stamping rules. It regulates the working and employment relationships the engineer must have with those who aid in the development of these products.

LRS 37:682(14) "Responsible charge" shall mean the direct control and personal supervision of engineering or land surveying service or work, as the case may be.

There are to me two offending processes. One is the development and promulgation of prescriptive laws and rules that I believe are completely inappropriate for a profession that should be regulated by general rules that must necessarily be interpreted in spirit and intent and thereby appropriately applied to a complex professional practice. The other is what would appear to be the use of the prescriptive rules that effectively copyright engineering products codify work relationships to selectively regulate small engineering businesses and practices in a punitive way observing that engineers in small businesses and practices are not and have not historically been represented on the LAPELS Board.

Previously, in the name of *responsible charge*, the LAPELS Board redefined the rules

(Continued on Page 21)

## Unplanned obsolescence

Aside from the burdensome cost of the fringe benefits and salaries associated with its labor contracts, columnist Robert J. Samuelson observes in his essay titled "GM's big problem outdated concept of management" — *Advocate* 12/1/05 — that General Motors inherits a self-defeating management style and business model formed during its glory days. The management style and business model are now maintained on the inertia from a distant history of success and resulting hubris in the face of unquestionable evidence — unrelenting failure — demonstrating that the business environment has long since changed and there is no rational basis to continue them.

GM presumes that its enlightened management can anticipate and control change. The management in younger companies do not suffer from this delusion because they have no long history and tradition of success in a less volatile and competitive market. Thereby, they are humble enough to accept and learn from recent experiences: In the future, they know that they face unanticipated surprises that will disrupt and can destroy their businesses if they are not prepared to react and counter their effects in a timely manner.

This difference in perception has led to

corporate blindness and a costly decline for GM now facing its 3rd major downsizing — 12 production lines and 30,000 employees — in 20 years. GM's management style and business model failed to anticipate or in a timely manner respond to the demand for smaller cars in the 1970s, superior quality and improved productivity in the 1980s, aesthetics and amenities in the 1990s and better fuel efficiency in the 2000s. Instead, GM's management stood pat until the financial consequences were so dire that a reactionary change was unavoidable.

The book *Only the Paranoid Survive* by Andrew S. Grove the CEO of computer-chip maker Intel until 1998 documents the approach of the management in the younger companies. He first offers his perception that business is chaotic and unforgiving. Given the chaos, Grove observes that all businesses experience transformational changes that he calls "strategic inflection points." If they are grasped and responded to in a timely manner by the management, continued growth is a reasonable prognosis. If not, steady decline and eventual failure are more likely.

This is a serious, real-life story of previous success going to management's head. It leads to a failure to accept and respond to clearly evident

fundamental changes — new paradigms — in the business environment. For General Motors, these fundamental changes have been ignored as much as possible along with the consequences of more than 30 years of financial and organizational decline to the point of bankruptcy. This is attributable to *momentum* fueled by the euphoria of previous success, *inertia* to avoid effective and timely change provided by the denial of market reality and the *force* of substantial wealth that forgives the denial and impels the company into slow failure.

This should be considered a tale of woe and of admonishment to all owners/management that guide the future of a business — including civil engineering — no matter its size. Complacency is a powerful opiate. To avoid it, not only must they find a way to continuously keep their heads in the game, they must also find a way to be reasonably sure that the game is the one actually being played. Avoiding dwelling on past success is not an easy task and it is not unique to business. For example, the United States military has more than once been caught by surprise preparing to fight a previous war rather than the one it has gotten.

Columnist Robert J. Samuelson in his 2/22/06 essay in the *Advocate* states a modern day axiom

...that in a *knowledge economy* — one where new information and ideas increasingly form the basis of useful products and government programs — nations need an adequate science and engineering work force.

He follows it with a debunking statement that

It is emphatically not true, as much of the alarmist commentary on America's competitiveness implies that the United States faces crippling shortages in its technological elites.

The evidence offered is:

- In 2004, the National Science Foundation reports that American colleges and universities awarded a record 233,492 undergraduate science and engineering degrees up 38 percent since 1990. However, of these the 64,675 engineering degrees have been stagnated since 1990.
- Graduate enrollments in science and engineering were a record 327,352 in 2003 up 22 percent from the low in 1998 while the engineering graduate students were up 27 percent over the same period. Though foreign-born students represent a growing share of the higher degrees, since 2000 the portion of native-born Americans and permanent residents increased 13 percent.
- Realistically, China and India are *not* out-producing the U.S. in engineers with their reported 600,000 and 350,000 a year. Many

of these degrees are 2- and 3-year associate degrees. Adjusting for this, the United States actually produces slightly more 4-year engineering degrees per capita than China and 3 times more per capita than India.

Since Russia put the first earth satellite — Sputnik — into orbit in 1957 there have been dire warnings that the U.S. is being overtaken technologically. As technology advances, it is acknowledged that more scientists and engineers are required. However, the capacity for scientific and commercial innovation does not correlate that well with the number of scientists and engineers. Hard work, imagination and business practices also matter as do the widespread ambition, openness to new ideas, easy acceptance of youth and immigrants into the workforce, venture capitalism and strong connections between universities and businesses that are all strengths in the U.S.

Samuelson makes another important point about the character of knowledge.

In some ways, the worldwide knowledge economy is unthreatening. Knowledge is stateless. Two Americans invented the computer chip; now its use is everywhere.

A world-class scientific and engineering workforce must be maintained in the U.S. if it is to sustain high-value economic activity and ensure its military technology superiority. The 2- and 3-year associate degrees in engineering that are included in the statistics provided for China and India should not be summarily discounted. People with these degrees often play substantial

roles in engineering works that otherwise are filled by those with a 4-year engineering degree.

Since engineers and scientists are 4 percent of the U.S. workforce, an adequate supply depends on 1,000s and not millions of smart college-bound students each year opting to choose such a career that suits their interest. However, career choice is more complicated than simply following one's intellectual interests. Considering there are 42 percent more lawyers and even a larger portion of investment bankers than scientists and engineers in the U.S. may imply that many a budding scientist or engineer may follow motives other than intellectual interests alone.

With the retirement of the baby boom generation's scientists and engineers, a shortage in the remaining number may loom. The simple solution according to Harvard Economist Richard Freeman is, "...pay them better and give them better careers." Business and industry leaders and their surrogates have continuously fanned the flames of an alleged crisis over a pending shortage on scientists and engineers. They appear to be interested in encouraging large numbers to enter science and engineering careers resulting low salaries through an over supplied labor market. It is encouraging that this phony message appears to be transparent and ineffectual in swaying those intelligent enough to become scientist and engineers.

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## Who's interest?

An interesting issue seems to have arisen out of the aftermath of the 2005 hurricane events in Louisiana. In reaction to the immediate review of the technical evaluations of the conditions that appear to have led to the failure of the flood walls and levees in the New Orleans metropolitan area and the surrounding region, accusations were allegedly made by some individuals who served on the technical teams investigating the failures. Whether the allegations were in fact made by a technical investigation team member or interpreted as such by a wishful news media always trying to stir controversy, it has led to what I would interpret as punitive accusations with little foundation in fact relative to culpability.

After apparently the more level heads involved had a chance to think clearly and further investigate, it was reported in later press coverage that the past flood protection recommendations made by the US Army Corps of Engineers based on its estimate of the best technological solutions from its investigations were opposed by the local levee boards. The boards proceeded to do a political end run around the Corps to Louisiana's congressional delegation that led to the United States Congress overriding the Corps' recommendations and the implementation of a "solution" that led to what would appear — with 20-20 hind sight — to be a very poor choice.

Rather than protecting the entrances to 3 drainage canals in New Orleans against the relatively infrequent but predictable storm surge with gates across their entrances, miles of flood walls were constructed along the drainage canal banks in problematic soils and with limited rights of way available for either economical or practical solutions. They appear now to be clearly a horrible political solution that will be perpetuated at the additional cost of the reconstruction of the sections that failed. Sinking huge resources into the repair and improvement of the miles of levees and flood walls on the banks of these canals that could be simply replaced with three flood gates at the mouth of the canals seems a little ludicrous but typical of the profligate, irrational waste usually associated with Louisiana politics.

This whole saga seems to get back to the basics of an effective client/engineer relationship. The local levee boards — the clients — are appointed by the Governor of Louisiana to ostensibly represent the interests of their constituents — the real clients — who are served by the flood protection systems over which the boards have been given the authority to manage. The Corps of Engineers through whatever arrangements that were made apparently served as the engineer(s) of record in studying the situation and advising the boards. After careful deliberation and review, the Corps made its recommendation for a feasible and economical engineering solution

that was summarily rejected by the levee boards.

The question that comes to mind is probably the same that many engineers in practice eventually have to face if they practice long enough. When a client instructs the engineer of record to do something that is not in the best interest of the health, safety or welfare of the public... what next? If a good heart-to-heart discussion of the problems and the costs do not solve the issue... what next? Whether you are a hired professional public servant or a retained professional practitioner, how far are you willing to go in such a conflict with a client? How far are you willing to compromise to keep your job, ...maintain a clear conscience and ...earn your fee/salary?

When the United States Congress — that one would think ultimately represents/defines the public's interest — sides with the client levee board that represents the local public interests, what recourse would or should the Corps have or need other than to do what is mandated. One significantly troubling issue that remains is what conditions may have led to possible deficient construction and the failure. Some initial results indicate that the levee/floodwall design may not have been adequate even by the standards under which the flood protection systems were originally designed and constructed, and intended to be operated and maintained.



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consumption of natural resources.

Consider that engineering — as we would like to believe — is a *professional* service and engineers are *professional* servants to their clients. This service is the technical knowhow to help define and translate a client's dreams and needs into tangible results — building and sustaining their infrastructure. The engineer's codified ethical obligation has been to protect the safety, health and welfare of the broader community. It is clearly the highest obligation and therefore above the obligation to be a loyal servant in meeting the demands of a client or employer that may be in conflict with the latter. Surely part of this professional service and its

tangible results must include more than myopic efficiency and effectiveness addressing minimum obligations.

I believe that there is a professional *duty* if not a clearly defined ethical obligation of stewardship associated with a client's best interests and that of the broader community to build an intergenerational and environmental legacy into every project insofar as it is practical. This is a legacy that seriously considers the preservation of the natural environment and seeks the efficient and effective use of the natural resources — materials and energy — used over a life-cycle in the context of green construction and sustainable development.

Only grudgingly meeting the minimum regulations and following the lead of others in these matters is *not* professional. Much like ethical obligations typically extend beyond the obligations of the law such as protecting the safety, health and welfare of the broader community, the uncoded obligation to preserve the natural environment and seek efficient and effective use of natural resources cannot be discounted. If they are, it would appear that this would reduce the incomplete engineering services to little more than the application of engineering technology to what others have wrought. Such an application would appear to approach being more of a *commodity* than a professional service.

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concerning plan stamping. The rule moved from a general statement to a whole series of prescriptive rules that may have profoundly affected the practice of small engineering businesses in Louisiana mostly through selective enforcement and the resulting intimidation. (See Louisiana Administrative Code, Title 46 – Professional and Occupational Standards, Part LXI. Professional Engineers and Land Surveyors, §2701 Chapter 27 – Use of Seals, 3. Seal Responsibility, b. Responsible Charge, ii.)

No licensee shall affix his/her seal or signature to reports, plats, sketches, working drawings, specifications, design calculations, or other engineering and land surveying documents developed by others not under his/her responsible charge and not subject to the authority of that license...

Its primary, adverse effect on engineering prac-

tice is that if literally and strictly interpreted and applied the rule essentially copyrights every engineering specification, plan and detail that has been previously developed and used. If the use of seals rule is literally interpreted and applied as its predecessor rules were to selectively regulate small engineering businesses and practices through enforcement, there is practically no product of engineering that can be generated that would not be in violation of the rules. It is tantamount to copyrighting each letter of the alphabet.

The Indiana State Board of Registration for Engineers made the mistake of attempting to enforce its plan stamping rule (the same as Louisiana's at the time) against a licensee with the resources for an effective defense and an appeal and it lost in the trial court and in its 1992 appeal — *State Board of Registration v. Nord*.

The LAPELS Board — by choosing to enforce the strict interpretation of its use of seals rule only against those without the resources for a defense or an appeal to have the rule overturned as precedent would suggest — has accomplished focused, punitive action against small engineering businesses and practices. No one can know and thereby question the motives of the individual or the majority of the members of the LAPELS Board. However, the consistent attempts to promulgate and perpetuate prescriptive statutes and rules to regulate the practice of engineering in a way that would appear to be inappropriate for a profession and inconsistent with the purpose of the governing statutes, and to selectively prosecute small engineering businesses and practices should — if nothing else — raise the question.

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Finally, Samuelson notes that the median annual salary of engineers rose 34 percent to \$58,000 between 1993 to 2003; math and computer science graduates rose 28 percent to \$50,000 while non science and engineering graduates rose only 7.7 percent to \$37,000. This may be explained by restrained growth that is being followed by the recent increases in enrollment in science and engineering that appears to be market and not rumor driven.

I believe that Samuelson has it right. The *real* national need for — and value of — the engineer is to maintain the technological competitiveness of the U.S. In this environment, adequate numbers of engineers will necessarily

be valued employees. This will be reflected in good salaries and bright career prospects. In turn, this will attract an adequate number of students into the engineering schools and the profession — a virtual cascade good outcomes.

For years, we have been and probably will continue to be propagandized by our own engineering societies and their proxies with the same lame notion of a looming — if not perpetual — shortage of engineers. Could it be that our leadership and/or the controlling interests of *our* engineering societies are openly espousing with some mendacity that which may not in the best interest of the profession? Satisfyingly, it is a waste of time they choose to waste.

What constitutes the fabricated or fantasized shortage of engineers that if taken seriously would tend to corrupt the balance of need and value appears to go to ulterior motive — perceived or unperceived. It is the desire for a continuing oversupply of newly minted engineers that must work on the cheap to even have a job. This would appear to be to no one's long-term best interest. Based on the effectiveness and believability of the message, those who would kill *The Goose Who Laid the Golden Eggs* are apparently enjoying a credibility somewhere between *Chicken Little* and *The Boy Who Cried Wolf*. So one must seriously ask the obvious. Why don't they just stop?

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