

A Roadmap to Resilience:

Towards A Healthier
Environment, Society
and Economy for
Coastal Alabama



**COASTAL
RECOVERY
COMMISSION**
of Alabama

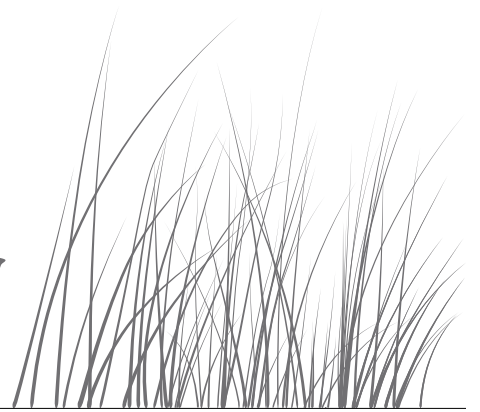
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1 The Coastal Recovery Commission





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 Ann Thierry
 Iris Thierry
 Mary Thompson, Council Member, Town of Dauphin Island

Mike Thompson, Administrator, Baldwin County
John Thornley, Business Banking, Regions Bank
David Treutel, Jr., CEO, Treutel Insurance Agency, Inc.
Bill Tunnell, Executive Director, USS ALABAMA Battleship Commission
John Turberville, Waterville, USA
Stan Virden
James Vorpahl, Construction Engineering Manager, Mobile County Engineering
Mac and Gina Walcott
Brent Wallace, Owner, Wallace Seafood Trader, Inc.
Ken Wallace
Phyllis Wallace
David Walter
Barbara Walters, General Manager, Island House Hotel
Bill Walton, Assistant Professor, Auburn University
Troy Wayman, Economic Development, Mobile Area Chamber of Commerce
Byron Webb, Seafood Specialist, Alabama Department of Public Health
Jean Weese, Professor, Auburn University
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OUR MISSION

THE PROBLEM:

The BP oil spill wasn't just an industrial accident that temporarily threatened Gulf coastlines. It was a catastrophe of proportions that may take decades to measure. Its impacts transcend emergency-response issues and have lasting implications for our coastal economy, ecology and social institutions.

THE SOLUTION:

Build regional capacity for long-term resilience. We must position ourselves to respond not only to future oil spills but also to other forces beyond our control, including everything from hurricanes to sudden shifts in the economic environment. We must assure a future for our coast that strengthens its appeal to visitors and investors from around the world and protects its environmental assets for generations to come.

HOW WE GET FROM THE PROBLEM TO THE SOLUTION:

We need to shape a roadmap to resilience. While no one can predict the future, we nonetheless must adapt to what it has in store for us. So we need to develop and implement strategies across a broad range of categories that strengthen our communities' – and our region's – adaptability and sustainability over time. That's the essence of resilience.

THE ROLE OF THIS COMMISSION:

We will draft the roadmap. First, in collaboration with individuals and organizations across the full range of disciplines touched by the spill, we will broaden our understanding of its impacts. Then, we will propose bold but attainable goals, based on the most authoritative research and reality-tested best practices. Our roadmap should guide Alabama, regional, and national leaders in implementing policies that protect, preserve and enhance the assets that make Alabama's Gulf Coast so important not only to Alabamians, but to the Gulf region and the nation as a whole.

WE WILL:

KEEP IT SIMPLE.

MAKE IT TRANSPARENT.

DO IT FAST.

2 Introduction

BY RICKY MATHEWS



PHOTO BY MIKE KITTRELL



What you see in the pages that follow is intended to be a benchmark in the history of planning in coastal Alabama.

We've been blessed with a coastal environment that has provided centuries of joy and sustenance to the people who have settled and visited here. And we are inheritors of traditions that predate the formation of the United States. These are our legacies. We've been entrusted with their care by those who came before us, and we owe it to those who come after us to preserve and enhance them.

Sometimes, we need to be jarred from our complacency in order to be reminded of our good fortune and of our responsibilities. Hurricanes do that from time to time. In the spring and summer of 2010, the Deepwater Horizon oil spill in the Gulf of Mexico delivered that message and its lessons in ways we could have never imagined.

The oil spill ultimately inspired a regional reassessment and added a sense of urgency. Because of the pain inflicted by the spill's impacts and the vulnerabilities they exposed, we were forced to look at what works and what doesn't work in our region and to organize ourselves to do better. We had to answer to each other in the present, and we had a future to shape in ways that assure a safer and more prosperous region.

Thanks to the vision of Alabama Gov. Bob Riley and the hundreds of citizen leaders who took part in the initiative he launched with the Coastal Recovery Commission of Alabama, we have begun a crucial and historic conversation. We believe we have helped set in motion a process that will inspire generational change. What emerges will not only strengthen coastal Alabama's role as the economic engine that drives our state, but it will position us to bounce back after the next challenge our region faces.

What we present here is "a roadmap to resiliency." It is up to us now as leaders of this great state to embark on the path we've outlined and to pursue its goals with the same passion we've brought to this 90-day effort.

Perception and Reality

We've had to face some stark realities in unexpected ways. When the oil started spewing into the Gulf of Mexico, our worst fear was that an environmental catastrophe loomed. Our lives and livelihoods in coastal Alabama are tied to the health of the Gulf, so threatened waters and shorelines amounted to a threatened region.

The worst and most immediate environmental nightmare hasn't materialized, but we have to be diligent in monitoring long-range effects and in responding to what the science tells us. The seafood tested safe. And BP and the coastal communities have been hard at work restoring beaches to their pre-spill state. Yet relief, if it came at all, was short-lived.

George Crozier, head of the Dauphin Island Sea Lab, explained in an October 15, 2010 op-ed in the Mobile Press-Register that it wasn't marine life he feared for most. "As someone who has spent a career studying Gulf of Mexico ecosystems," wrote Crozier, "I am optimistic that – so far, at least – changes to those systems as a result of the spill may be perceptible only to marine scientists probing the details.

"Unfortunately," Crozier continued, "the human component of the Gulf's ecosystem does not appear to be showing the same degree of resilience. And it is that set of effects – the toll on the everyday lives of humans and on the regional economy – that we should be most concerned about at the moment."

The problem was perception. As the cartoon on this page from the *Press-Register's* J.D. Crowe illustrates, national assumptions, fed by media depictions of dying wildlife and oil-laden waves washing ashore, were out of sync with the reality on the ground and in Gulf waters. Tourism revenue plunged, as did the economy driven by the region's commercial-fishing and seafood-

processing industries. The southern sections of Baldwin and Mobile counties were hit especially hard, driving businesses into bankruptcy or near bankruptcy and families into chaos.



At the urging of the president of the United States, BP set aside \$20 billion to compensate governments, communities, businesses and individuals suffering losses because of the oil spill. Attorney Kenneth Feinberg was appointed "claims czar" and charged with evaluating submissions and expediting compensation. Perhaps understandably, because of the complexity of the task and the volume of claims, the process moved forward in fits and starts. That inspired more distrust and suspicion, more anger, more pain.

Here, I have to add a personal note. Ours was never the task to arbitrate victim compensation or even to engage in the compensation debate. Yet no matter how hard I've tried to focus attention on the big picture of long-term resiliency planning, which is our Coastal



Recovery Commission mandate, I cannot purge from my mind the tragic stories of folks about to lose everything as a result of an economy that has collapsed on top of them.

But the public- and private-sector leaders of the hardest hit areas stepped up in ways that continue to inspire me. They joined with others across coastal Alabama and the state in an intense conversation about our region's future. Tempted as they must have been to narrow their focus to only the needs in their own communities, they were able to see how collaborating with neighbors in a truly regional effort would advance everybody's best interests.

We owe it to those leaders and the people in their com-

"There has to be a synergy, in my opinion, between Mobile and Baldwin counties and whatever other counties that are involved to where we create a greater whole because of our figuring a way to work together.



"In no way are we looking at what's best (only) for us. We're thinking about what's best for our neighbor. If it's reciprocal, we're both going to be elevated beyond what we're going to be able to ever do trying to compete with each other."

Orange Beach Mayor Tony Kennon

"Nobody was affected more than the people in south Mobile County. Here, what people don't catch this day out of the water, they don't eat that night. (But) the easiest thing we can do is divide up, and then I feel we'll be conquered."



Bayou La Batre Mayor Stan Wright

munities to honor their courage with our concern. So here are the first and most immediate recommendations to come out of our process:

Let's fix the claims process. Let's get deserving families and businesses the money they need to recover financially. The region needs their contributions. And the state, which derives more than 20 percent of its tax revenues from our region, needs the economic engine of south Alabama to regain speed.

Let's recapture and enhance the Gulf brand for seafood and tourism. There's no better investment of BP funds than in a marketing plan for overcoming the misplaced perceptions of unsafe seafood and oil-spoiled beaches.

Let's invest BP penalty funds, when and if they become available, where the most oil-spill damage occurred. We urge the federal government to apportion funds equally between the affected Gulf states and to let the states decide how best to use the money. Those who have suffered the most deserve no less.

Getting to Decision-Making

As we've moved through our meetings and discussions, we've been pulled back again and again to a core dilemma in decision-making: Dealing with uncertainty.

In the case of the oil spill and its aftermath, we've been reminded that nature's timelines are different from ours. As anxious as we were for a definitive all-clear signal from scientists, we had to come to terms with the realities of complex systems within systems that make up the networks of life in the Gulf.

We demanded certainty: Tell us everything's going to be all right or not. And tell us now.

Scientists urged respect for what we cannot yet know.

There's no way to predict precisely how the oil, the dispersants and the bio-chemical processes they influence will thread their ways through the food chain. The only responsible answer to questions about what will happen over the long term is: We don't know yet. We may not know for a long time, maybe ever.

The problem is, uncertainty doesn't excuse us from the necessity of – and the responsibility for – making decisions. The act of not deciding is a decision itself, and its outcome is paralysis. We have to be determined to act with the best knowledge we have and be prepared to alter our course when new facts conflict with old assumptions.

This is not an uncommon dilemma for leaders in any endeavor. It's just more dramatic when the future of the entire Gulf region is at stake.

Where Our Process Took Us

You can track our discussions and conclusions in the chapters that follow. You'll see where we wrestled with conflicting perspectives, sometimes resolving them and sometimes not. We have devoted a section of the Appendix to simply listing the 270-plus ideas that were put on the table over the 90 days of the Commission's work. And the infrastructure subcommittee of the Healthy Economy committee has taken the time to explore a kind of sorting tool for evaluating proposals against the resiliency criteria that evolved.

The most technical chapter focuses on coastal insurance. That was our intention from the beginning, asking former Alabama Insurance Commissioner Walter Bell to assemble a special subcommittee and a set of advisers to present the options for achieving insurance affordability.

This is not just about people who chose to live on or near the beach. This issue impacts people and institu-

tions far inland, those that depend upon the tax revenues generated in our coastal counties. For the hard-working people of coastal Alabama and the companies that employ them, unaffordable insurance presents an often-insurmountable challenge to living and working in coastal areas.

People affected include those who work in our port, building the ships that defend our nation. They're the teachers, police and firefighters who need to live in the communities they serve. They're the workers in the tourism and seafood industries that fuel the economic engine that drives the state. We owe it to them, to the people of Alabama, in fact, to have a serious conversation that will set us on a course to solve this crisis.

We know that what constitutes "affordable" will be hotly debated. It already is. But we owe it to citizens and businesspeople to face the facts of risk management and to consider the range of options that might move coastal insurance premiums and deductibles within range of more budgets. We consider insurance an economic-development issue and encourage decision-makers at the regional and state levels to think of it that way.

The Report's Broad Themes

Just about everything we're proposing connects to one or more of these broad conclusions:

We're better together. Despite old rivalries and cynicism, key leaders and institutions in both coastal counties are willing to come together and plan for a better future as a region rather than as a string of competing, disconnected places. We need to nurture and grow that spirit. So we're proposing a Coastal Alabama Leadership Council to take up where the Coastal Recovery Commission leaves off, embracing its key recommendations and working to implement them. At the top



of its to-do list: leading a regional strategic planning effort that will enable the transformational change Gov. Riley and the CRC advocate.

We're all linked to the Gulf in ways we're just beginning to understand but must respect in order to get the results we hope for. If we didn't already understand our connection to the health of the Gulf of Mexico, we do now. The connections between the health of our communities, the health of our economy, and the health of Gulf waters and shorelines are powerful. No strategy that moves us forward can fail to acknowledge interdependencies. We're urging a continuation of the conversation we convened in our committee sessions between representatives of private, public, and non-profit sector organizations and agencies. And we're recommending to the new governor that he create a deputy position that reports directly to him and assumes responsibility for strengthening these coalitions and coordinating resilience and recovery strategies.

We don't live on the Gulf of Alabama. Just as we should be committed to breaking through barriers that

separate issues and strategies related to the two counties and to the environment, society and economy, we must recognize that we are players in an even broader Gulf region. We must work to strengthen existing alliances between Gulf states and create new ones whenever such an effort can advance goals we hold in common. For example, we are proposing a new seafood-testing, -marketing and -promotion board that will work with other Gulf states to recapture and enhance the Gulf brand for quality seafood. Something similar might be possible for coordinated tourism strategies across state lines.

Our Gratitude for Support and Participation

What you'll see in these pages is an astounding amount of work by regional leaders and staff over a very short period. We intentionally compressed work that might have taken years into just three months. First, we wanted to get a planning process begun, should resources suddenly become available from BP oil-spill penalty

fees and related funding. Second, we know that a prolonged process would allow busy folks to bump Commission priorities lower on their already-crowded to-do lists. We wanted the Coastal Recovery Commission at the top of everyone's list. It was critical that we build regional leadership capacity around the oil-spill recovery. Nothing less than the future of our region and our state was at stake.

A glance at the 600 names of commissioners, elected officials, advisers and other participants in our meetings will give you an idea of the minds and the networks of influence attracted to this effort. I am personally grateful for the response of so many to the governor's invitation to join with us and to my requests for involvement at levels people might not have anticipated.

One of my proudest moments during our three months work was hearing a prominent regional leader mirror my thoughts: "If not a dollar of BP money comes our way, this is still a process that was absolutely essential. We have to do this. It is up to us to control our own destiny."

At the center of this effort, of course, was Gov. Bob Riley, who took an enormous leap of faith by entrusting me – a newspaper publisher with whom he has not always agreed – to chair a commission whose processes and end-conclusions he would not control. The governor understood from day one that this plan needed to be developed by the people of Alabama. He repeatedly said, "This cannot be my plan." This Commission and this report will add to his legacy.

The governor-elect, Dr. Robert Bentley, has already demonstrated similar vision and similar courage. Though his election came in the middle of our process, keeping him from direct involvement in our meetings, he monitored our progress. And he met with us as soon as possible after the November election to get a thorough briefing and to signal his endorsement of

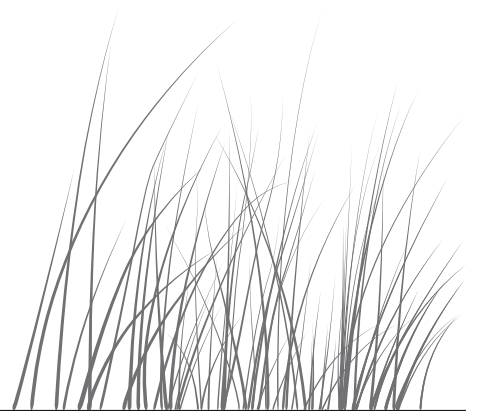
our broadest goals. We look forward to collaborating with him and his team as we move into the next stages inspired by this report.

As you read these pages, you will be impressed by the work of a staff assembled at a break-neck pace. Even though most didn't know one another when the effort began, they jelled almost immediately and accomplished wonders on the tightest of deadlines. This book is a tribute to their talents and energy.

I've said from the beginning that this effort and this report would mark the beginning of a journey and not the end. Though we can be proud of what we've done in 90 days, our efforts will be judged by what we – and those we inspire – do in the weeks, months and years after we present this report.

We have strived to set a standard for resiliency planning and to lay a foundation for an even more intensive and results-focused regional discussion. The starting agenda is in these pages. Let's follow it.

3 | Our Process





In the 90 days between September 15 and December 15, the Coastal Recovery Commission of Alabama:

Recruited more than **600 Alabama leaders** to participate in the effort to draft strategies and proposals for this report;

Engaged dozens of **elected officials** and their staffs at the community, county, state and federal levels;

Attracted more than **1,000 attendees** to our committee and sub-committee meetings and to public discussions we hosted in communities;

Reviewed more than **270 projects and proposals** for improving quality of life in the region;

Produced four work-in-progress **video reports** and commissioned a documentary about the whole process;

Launched and maintained an interactive project **website** chronicling progress and archiving background information (www.crcalabama.org);

Inspired continuing **media coverage**, including print and broadcast news stories, op-eds, and two hours on Alabama Public Television dedicated to CRC goals and processes;

Produced this report, **“A Roadmap to Resilience”**, as a crucial conversation-starter for assuring a healthier environment, society and economy in coastal Alabama.

April 20

Explosion and fire on the Deepwater Horizon oil rig, killing 11 of the 126-member crew. Oil begins spilling into the Gulf of Mexico.



September 19

Admiral Thad Allen confirms that well kill operations are complete.

The Spill: While the precise estimate of oil spilled into the Gulf will be contested in negotiations between BP and the U.S., as of December 15, federal government scientists estimated that the Deepwater Horizon well spouted 4.9 million barrels (206 million gallons) of oil. The scientists estimated BP's containment efforts captured about 800,000 barrels, leaving 4.1 million barrels, or 172 million gallons, in the Gulf.

July 15

Oil well capped, and oil ceases to flow into the Gulf of Mexico.

June 16



Following a meeting with President Obama, BP agrees to create a \$20 billion fund over three and a half years to meet obligations arising from the spill.

Impacts of the Spill



In the short term, at least, the natural environment of the Alabama coast seemed to have suffered less obvious damage than most dared hope. Human ecosystems, on the other hand, were hit hard. The spring and summer of 2010 became a lost season for coastal Alabama

tourism. And even with scientists' assurances of seafood safety, commercial fishing and seafood processing businesses have been slow to rebound.

September 27

Governor Bob Riley issues the executive order creating the Coastal Recovery Commission (CRC) of Alabama.



October 26

Second full CRC meeting at the Battle House Renaissance Hotel in Downtown Mobile to review work in progress. More than 300 attend.

Meetings of committees and subcommittees continue through November and into early December.



September 28

The CRC holds its kick-off meeting at Five Rivers Delta Resource Center in Spanish Fort. The 80-plus-member commission divides into committees and subcommittees to meet weekly or even more often to sort through strategies and proposals to create a more resilient coastal Alabama. The list of participants will grow to 600 by the end of the process.



December 15

The Coastal Recovery Commission submits its report to Gov. Bob Riley and Gov.-elect Robert Bentley in the Old Statehouse Legislative Chambers in Montgomery.



4 | What Is Resilience?

BY BEN BROWN

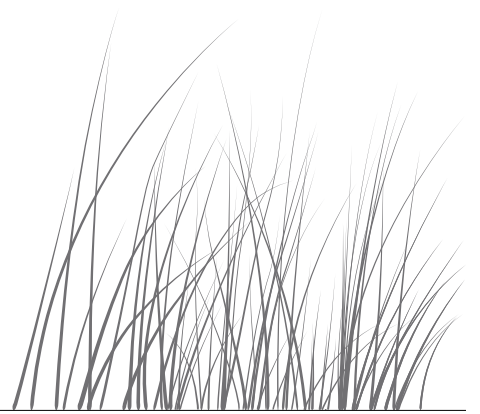




PHOTO BY G. M. ANDREWS

Increasingly over the last decade or so, teams of researchers and experienced relief providers have begun studying communities around the world in the wake of catastrophes – earthquakes, hurricanes, tsunamis and other events that threatened the very existence of towns and whole regions. Some communities were equipped to bounce back effectively, leveraging their resources in order to acquire what they needed. Even amid rubble, they could reorganize their societies and economies. Many used lessons learned from their traumas to change approaches – design and building plans, for instance – in order to be less vulnerable to the next disaster. Other communities, facing similar ordeals in similar terrain, lacked the wherewithal to recover comparatively. They were stuck in the storm, perhaps for good.

What the researchers wanted to know was: What made the difference? Were bounce-back capabilities embedded in community DNA or could they be acquired?

Those questions inspired a field of “resilience studies” which has been growing over the last decade or so, mainly due to the human and economic toll of recent mega-disasters: the 2004 Indian Ocean tsunami that killed 230,000 people; Hurricane Katrina in 2005 that required a \$100-billion-plus federal recovery effort on the Gulf Coast; and the 2010 Haiti earthquake that left an estimated one-million people homeless.

COACHING COMMUNITIES TOWARD RESILIENCE

When planning, coastal areas and other regions that must consider natural and man-made hazards could use a tool kit for risk management. That's what the Community and Regional Resilience Institute (CARRI) has in mind.

It's an effort from The Southeast Region Research Initiative (SERRI) supported by the U.S. Department of Homeland Security and operated by the Department of Energy's Oak Ridge National Laboratory in conjunction with other federal, regional, state and local partners. The idea is to share academic and government resilience studies more broadly and adapt them for practical application in communities and regions.

CARRI only began in 2007, but it's already offering a wealth of information and advice for those seeking to get up to speed in current thinking about resiliency. The research papers alone can provide people new to the resiliency conversation with sufficient background to advance the discussion in their areas.

See it all here: www.resilientus.org

If it were possible to strengthen resilience capacity in a community or region, think of the lives, homes and businesses that might be saved. And since governments are almost always the relief providers of last resort, consider the taxpayer money that might be better invested in preparing communities ahead of time to avoid the direst impacts of catastrophe instead of rescuing them from catastrophes' effects – sometimes over and over.

Many of the researchers' findings were obvious. Resilient communities had better early-warning systems, emergency-responder training and equipment, and disaster-tested communications. Those with structures fortified to withstand earthquake tremors or storm winds increased their chances for fast recovery. The same for communities that planned with threats in mind, restricting development in flood zones, for example. But other resilience strategies were less connected to textbook disaster preparedness than to best practices for everyday health and happiness.

Communities with strong disaster resilience capacities were often those that were already doing well at the things citizens and businesses most value – having leaders the people trust and institutions that work, having a healthy environment, having a regularly maintained infrastructure designed to anticipate stresses, and having a flexible economy that provides opportunities for broad cross-sections of workers and investors.

When disaster strikes such a place, there is a kind of muscle memory for high performance. That's an environment that would attract investors looking for lower risk and higher upsides. So resources would be more likely to arrive quickly and at sufficient levels, speeding the bounce-back and rewarding a mind-set that builds resilience capacity – even if that's not what the locals call it.

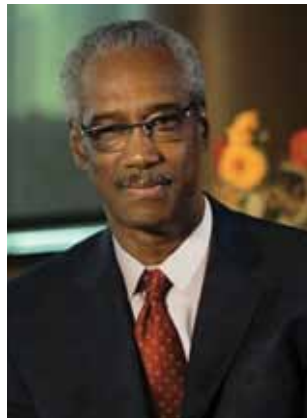
In this report, we decided to call it exactly that, because we wanted to align lessons learned about the

vulnerabilities of coastal Alabama communities in the wake of the BP oil spill with proven resilience strategies that make it less likely the region will have to go through this kind of suffering again when the next challenge confronts us.

Resilience Is About Risk Management

Walter Bell – Alabama’s former Insurance Commissioner, current chair of the international insurance firm Swiss Re America Holding Corporation and also chair of the Coastal Recovery Commission’s insurance subcommittee – connected risk-management theory with resilience in an October 24, 2010 *Mobile Press-Register* op-ed:

“The idea is to first recognize the inherent risks in where we are located and how we choose to live and work, and then to adopt approaches that eliminate, reduce, mitigate or transfer those risks in ways that make them more manageable over the long haul.



“Taken together,” wrote Bell, “those strategies make up the tool kit of risk management. And it’s possible to see the entire Coastal Recovery Commission effort as one big risk-management exercise.”

The insurance industry forces a rubber-meets-the-road discussion about resiliency planning because it establishes a dollar amount for perceived vulnerability. Despite the volatility of the debate over what’s fair in regards to coastal insurance affordability, the bottom line is that somebody is going to pay the bill for the degree of risk the industry is willing to take. In a purely

SOUTH BALDWIN COUNTY’S “WAR ROOM”

The first group to localize and refine resiliency strategies after the Gulf oil spill was a collaboration between the Alabama Gulf Coast Chamber of Commerce, the South Baldwin Chamber of Commerce and regional educational institutions. They even put “resiliency” in the name of their group: The Coastal Resiliency Coalition. And they created a “War Room” for strategy sessions at a Gulf Shores real-estate office.

In early fall of 2010, shortly after the spill, they created a set of best practices for resiliency planning, identifying five key task categories: Human Service; Banking and Finance; Business Survival and Growth; Communications; and Politics. And they assigned regional leaders to lead efforts under those headings.

Besides attracting funding from a variety of sources, including BP, for immediate efforts to help families and businesses struggling to overcome economic and social impacts of the spill, the Coalition evolved mid-term and long-range strategies. Many elements of those strategies have already achieved the status of permanent initiatives, and many have been incorporated into Coastal Recovery Commission recommendations.

You can see examples of the Coastal Resiliency Coalitions planning documents under Resources on our website: cralabama.org.



LOCAL FOOD FOR A HEALTHY COMMUNITY

Farmers Markets and Community Supported Agriculture (CSA) programs can be key components of a regional resilience strategy.

They boost opportunities for local farmers, who realize only pennies on the dollars in the industrial farm-to-market model but who can get higher profits on fewer acres when they sell directly to consumers.

They increase the supply of healthy food alternatives in a market saturated with overly processed, fast food.

They bolster regional self-reliance, especially when national food-distribution chains may be disrupted by disasters.

And because local food-growing and -distribution networks can cut down on long-distance transportation costs, they help reduce our reliance on fossil fuels.

The good news is that the trend towards expanding access to locally grown and locally distributed food is already well underway.



market-driven environment, families and businesses pick up the total tab. To offset some of the burden on citizens and the regional economy, governments may reduce insurance providers' risk through subsidies. Or there might be combinations of public, private and non-profit approaches that mitigate risks and achieve levels of insurance affordability, making living and doing business on the coast easier for more folks.

Definitions of acceptable affordability cover a wide range, however. And almost no one faced with high insurance premiums and high deductibles is going to be excited about paying the price. But the price is going to be paid one way or another.

“Hurricanes Ivan and Katrina forever changed the perception of risk in this region,” wrote Bell in his October op-ed. “In the aftermath of these tragedies, both the public and private sectors recognized that they had underestimated the risks of Gulf Coast living.

“The subsequent adjustment in premiums has added to the cost of building – or even remaining – in coastal communities. This poses an additional challenge to growth and investment and the region’s ability to absorb hits and recover.

“That bounce-back capability is the essence of resilience.

“That’s why meetings of our insurance subcommittee of the Coastal Recovery Commission of Alabama have been so well attended. We’re charged with resilience repair.”

Resilience Implies Sustainability

Too often, sustainability discussions seem to get stuck in arguments over environmental protection when “environment” is understood as nature absent the messiness of human activity. According to the most extreme versions of this viewpoint, humans participate in nature only as disrupters and defilers, suggest-

ing that success in environmental protection should be measured by the degree to which humans can be subtracted from the landscape.

That is an unsustainable position, since humans can't help interacting with the natural environment. We're embedded within nature and actively integrated within its ecosystems with every breath we take. Even more dangerously, the extreme perspective of humans as outside nature lets us off the hook. It diminishes our roles and responsibilities as stewards of the systems that give us life.

By definition, sustainable systems are resilient ones. The primary goal of sustainability, after all, is survival. If you aren't engaged in strategies that increase your chances of survival, you're flunking the resilience test. There's no time limit on that rule. It applies whether we're talking about survival through a storm or through a range of threats over millennia. The problem is, the greater the time until a perceived threat becomes an irreversible reality, the harder it is to muster the will and the resources to prepare. It's difficult enough for us to interrupt our daily coping concerns to think about hurricane preparedness. Global warming? That's beyond most folks' imaginings.

The long-range resilience and sustainability strategies that seem to work best are ones with short- or at least medium-range rewards. You fix the roof when it's not raining and you reap the benefits when storms come. You design storm and wastewater management systems so runoff and wastes don't foul groundwater and estuarine ecosystems, and you protect community health and the chain of life that contributes to a regional economy. You improve educational opportunities for more people, and you build an adaptable workforce more likely to attract companies that offer jobs at higher wages. You invest in systems that make healthy choices easier, and you reduce costs for addressing



The U.S. Department of Agriculture reports that the number of farmers markets in the U.S. increased 16 percent to more than 6,100 in the last year alone. The State of Alabama has a Farmer's Market Authority with an active "Buy Local, Buy Fresh" initiative fma.alabama.gov/Buy_Fresh.htm.

On the Alabama Gulf Coast, local growers and local food consumers can connect through a new Coastal Food Coalition: coastalfoodcoalition.com.

chronic disease and free up budgets to improve health-delivery services.

You'll see these sorts of connections throughout this report. Many are obvious. Some are unexpected. This is an exercise in alignment, in developing strategies and proposals that serve multiple purposes, enriching quality of life and economic opportunity immediately and building resilience capacity for the long haul.

Resilience Builds Self-Reliance

No one likes to be stuck in victim-mode. By definition, victims are overwhelmed by forces beyond their control. When you have no control, you're deprived of the opportunity to make choices that lead to meaningful results. You're dependent on the choices of others to survive. There's no feeling more frustrating, more anger-inducing, more depressing than that. In fact,

depriving humans of the sense that their choices count is a tool of torture.

So community resilience requires moving people after a calamity as quickly as possible from a victim mentality to confidence that they can have a meaningful role in their own rescue and in the recovery of their communities. They need to feel self-reliant.

Emergency response systems help with that. Being prepared to get folks out of harms way; to feed, clothe and house them; and to supply them with reliable information – all of that is essential in diminishing the sense of victimhood and the psychological impacts of uncertainty. It requires planning and resources. And you'll see recommendations that address that sort of preparedness in these pages.

We will stress, just as vehemently, the deeper and



broader levels of strategic planning necessary to build resilience. And we suggest that the pitch for making the investments in time and money to achieve resiliency objectives should be based on values dear to Alabamans – values connected to self-reliance.

What resilience means for families and communities is the ability to take care of your own, to not have to count on government or non-profit assistance any longer than absolutely necessary.

It's important that we not mistake self-reliance for an everybody-for-themselves attitude. If there's one lesson learned from the oil-spill disaster, it's the lesson of community collaboration. In his remarks to folks gathered at a CRC meeting in Bayou La Batre in early November of 2010, Jo Bonner, the U.S. congressman representing the coastal region of Alabama and a CRC commissioner, put it this way:

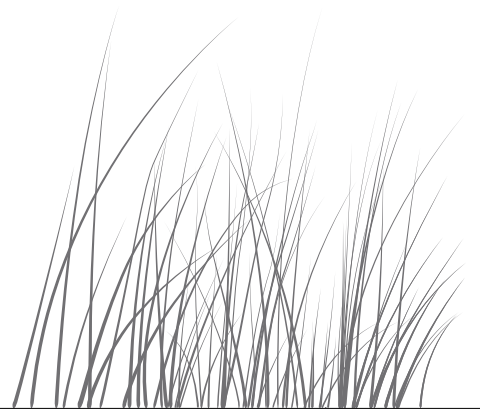


“One of the good things that came out of the tragedy of April 20 and the days that followed from the Deepwater Horizon was a spirit of solidarity unlike anytime we have ever seen.

“We are one coast, we are one community,” Bonner continued, “and we will be stronger as a result of this tragedy.”

5 | A Healthy Environment

BY STEVE MILLBURG





Environment

In coastal Alabama, everything depends on the environment. It lures people here to live – or to escape to their second homes as often as they can get away. It draws throngs of tourists to play on the beaches and swim or fish in the water. It supports a substantial seafood industry.

The environment nourishes us physically, economically and, as anyone who has spent time by the water can tell you, emotionally and spiritually. When a visitor from Indiana toasts the sunset from her hotel balcony, when giggling children splash in the cool surf, when diners savor the sweet taste of fresh Gulf shrimp, when convention-goers sneak away from their meetings for a bit of beach time, when a retired couple lunches together on their deck so they can enjoy the sea breezes and the cries of the gulls – in each of those cases, Alabama’s coastal environment has cast its spell.

However, when you base your life and your economy on water and sand, you become vulnerable to disasters of both natural and human origin. Through long experience, Alabama’s Gulf Coast has learned how to bounce back – if somewhat imperfectly – from hurricanes and other storms. But the Deepwater Horizon oil spill presented a new set of challenges and exposed new vulnerabilities. The road back to normal following that disaster has not been so clearly marked.

The spill did provide clarity on at least one subject: the core importance of the environment to almost everything in coastal Alabama. In early October, LaDon Swann, director of the Mississippi-Alabama Sea Grant Consortium, appeared in Orange Beach at an Auburn University-sponsored conference called “Road to Restoration.” During a panel presentation, he said, “Quality of life is directly tied to the environment. I think after six months we all realize that’s not just something we say.”

Immediate Impacts

In the short term, the Alabama coast suffered less obvious damage than most had dared to hope. The most visible immediate environmental impacts involved some oil washing ashore on beaches and in a few marsh areas. The strategy of using dispersants was (and remains) controversial, but it did achieve its aim of keeping most of the oil from reaching beaches, marshes, wetlands and other critical wildlife habitat.



PHOTO BY KATE MERCER

Media stories featuring oil-drenched birds struggling pathetically to escape the suffocating goo provided some of the most heartbreaking images of the spill. Damage to undersea life has obviously been much harder to observe and quantify. Scientific surveys have turned up conflicting results, ranging from reports of large areas of sea floor covered with dead creatures and a layer of crude to “where did all the oil go?”

During the spill, teams from Scripps Institution of Oceanography in San Diego swooped into the Gulf to carry out several research projects. Marine ecologist Jeremy Jackson, who has studied oil spills in Panama, said hidden effects on seemingly minor parts of the ecosystem can have major consequences. “Who cries for the plankton?” he told *ScienceDaily*. “Who cries for the minnows? The stuff you can’t see is the basis of the food chain and every bit as important as the charismatic birds, whales and dolphins. The oil is certainly drastically disrupting the food chain of the entire northern Gulf.”

At this point, probably the best summation of even the short-term environmental impacts is: We don’t know. As recently as November 24, a 4,200-square-mile area off Louisiana, Mississippi and Alabama that had just been reopened for deepwater royal red shrimp was closed again because an Alabama shrimper pulled up tar balls in his nets. The ongoing Natural Resource Damage Assessment (NRDA), the federally mandated process that follows any oil spill, will eventually provide thoroughly researched and documented information.

In terms of public perception, however, there is no doubt: The impact was catastrophic. In the minds of the general public, a few tar balls seemed to multiply into “beaches covered with oil.” Tourism crashed. So did consumption of Gulf seafood.

Impacts on estuarine and marine fisheries stocks remain uncertain. Public suspicion persists about whether Gulf seafood is safe to eat, despite repeated testing that has found no contaminated fish or shellfish in Alabama waters.

National polls show fears about seafood slowly subsiding. Coastal Alabama won’t know whether the tourists will return until next spring and summer.



Meanwhile, recovery continues. Orange Beach Mayor Tony Kennon reported at a November 8 public meeting that BP machines were deep-cleaning his city's beaches and were to be finished by January 1, 2011. BP told him it then planned to clean the oil from the surf zone, prompting him to wonder whether BP ought to have done that first so that surf-zone oil wouldn't foul the newly cleaned beaches. Even after the cleaning, some residents have complained that their once sugar-white sands are now the color of tea.

Long-Term Effects

Uncertainty about potential long-term effects (because there have been no directly comparable historical spills) contributes greatly to public concern and suspicion. Both the scientific community and the general public worry about potential future damage to fish and shellfish, including the possible loss of a generation of some fish stocks. Four years after the 1989 Exxon Valdez spill in Alaska (which totaled 11 million gallons of oil, or about 6.4 percent of what spewed from the Deepwater Horizon well), the herring fishery in Prince

William Sound collapsed. Almost two decades later, it has not recovered.

“Though an impressive effort has been made to clear Gulf of Mexico beaches of surface oil, it has seeped into the sand and sediment and remains hidden below the surface of beaches and marshes,” said Steven Pennings, a professor in the department of biology and biochemistry at the University of Houston, writing in the November 20 issue of the *Houston Chronicle*.

Pennings is a member of the Gulf Coast Ecology Working Group, which consists of 26 ecologists who do research in the Gulf of Mexico. He said it's not the fatal effects that have the greatest long-term impact on wildlife populations. “Examples of such nonlethal effects include tissue damage that affects organ function, damage to the DNA that makes up the genetic code, disruption of hormone functions or decreased growth or hatching success of embryos.”

The Mabus Report points out: “The Gulf of Mexico is the only spawning ground of the critically depleted

western Atlantic population of the bluefin tuna, which was just past the peak of its spawning season at the time of the spill. Tuna produce buoyant eggs, which may be particularly impacted by the oil spill.”

The spill introduced an estimated 172 million gallons of oil into the Gulf. Much of it is still there in some form – as raw or degraded crude oil or as oil-digesting microbes and their waste products. Because of natural oil seeps, the Gulf of Mexico contains lots of oil-eating bacteria. Nobody knows the long-term consequences of giving them such a lavish banquet of petroleum. Nor can anyone know what will happen when future storms stir up this carbon cocktail and possibly push it onto beaches and into marshes.

“A substantial percentage of the crude oil released never reached the surface and remains in the deeper Gulf as carbon of largely unknown shapes and sizes,” wrote Dauphin Island Sea Lab Executive Director George Crozier in the October 17 *Mobile Press-Register*. “Effects in that particular habitat may not be known for years.

“The 200 million gallons of crude oil released have largely been transformed into other forms of carbon – some as dissolved organic carbon or carbon dioxide, some as a lot more bacteria that ‘ate’ the oil,” Crozier continued. “Presumably, it has progressed up the food chain toward us.”

What especially worries many Gulf Coast residents are the potential effects of the more than 1.8 million gallons of dispersants that BP sprayed onto the Gulf and mixed deep underwater into the oil gushing from the well. The dispersants broke the oil into small droplets that remained suspended in the water. Considerable anxiety remains about possible toxicity to both wildlife and humans.

On November 8, the federal Gulf Coast Ecosystem Restoration Task Force, chaired by Environmental

Protection Agency Director Lisa Jackson, held its first public meeting in Pensacola, Florida. During a public comment session, a woman from Alabama said, “We in the community don’t trust what’s being said to us. We know people are getting sick and the seafood is not safe. People are getting sick from seafood and the dispersants.”

A woman from Louisiana asserted that the dispersants were toxic by themselves and more toxic when mixed with oil. “There are 20 countries that have banned it, and we’re spraying it on our people,” she said, her voice shaking with anger. “My government has poisoned not only my land and my water, but also my grandchildren.” Such visceral distrust, like vestiges of the oil itself, seems likely to linger for quite some time.

Vulnerabilities

The Healthy Environment Committee found spill-exposed vulnerabilities in three main areas: management, coordination and communication; data and monitoring; and the ecosystem itself.

Management, coordination and communication

In responding to this disaster, weak coordination contributed greatly to public anxiety and distrust. The Oil Pollution Act of 1990 (OPA 90) requires the president to direct the public and private response to a spill that constitutes “a substantial threat to the public health or welfare of the United States (including but not limited to fish, shellfish, wildlife, other natural resources, and the public and private beaches and shorelines of the United States).”

For the Deepwater Horizon spill, the Obama administration named Coast Guard Admiral Thad Allen as the “incident commander.” However, to those on the Alabama coast, it wasn’t always clear who was in charge or whether anyone knew what he or she was doing. Neither BP nor the Coast Guard showed much interest in



consulting state or local officials or taking advantage of local expertise to help fight the spill.

At the Road to Restoration conference in early October, mayors Tony Kennon of Orange Beach and Robert Craft of Gulf Shores spoke of what Kennon called the “top-down arrogance” of BP and federal officials. “We had areas of expertise,” he said, “but we were ignored. Their contractors from out of town were in charge.”

In fairness to the Coast Guard, it must prepare for spills at any location and can’t count on local resources being available. Instead, it calls on those with whom it has worked previously. And so the Coast Guard brought in skimmer boats from Alaska and Norway and wildlife rescuers from Delaware, much to the frustration of Alabama boat captains and wildlife organizations.

The Coast Guard thinks OPA 90 “has been so effective” and is “proving itself to be a pretty good package of legislation.” So said Coast Guard Rear Admiral Mary Landry at the Road to Restoration conference. She also said she considers the response to the BP oil spill to be an excellent example of “government and the public sector coming together in a time of crisis.”

The Coast Guard is, by design, a top-down, chain-of-command organization. Landry displayed an “Overall Organizational Chart” for the “National Incident Command Deepwater Horizon Oil Spill Response.” It contained 43 boxes, starting at the top with one labeled “POTUS” (“President Of The United States”). There was no box labeled “Local Officials.” In order to mandate that the decision-making process involve local officials, even in an advisory role, OPA 90’s provisions would have to be changed.

Lance LeFleur became director of the Alabama Department of Environmental Management on May 1 – just in time to dive into the middle of the mess when ADEM was named the coordinator for Alabama state agencies responding to the spill. “Clearly,” he said at the Road to Restoration conference, “communication was the biggest problem.”

Poor communication among spill responders led to an even greater lack of credible communication with the public. Information from BP and federal officials kept changing, often contradicted itself and sometimes conflicted with what coastal residents saw and heard for themselves. That quickly created an overwhelming lack of public trust. At the Road to Restoration

conference, George Crozier put it this way: “Why do shrimpers think the shrimp are tainted? Because the government says they’re not.”

Those who live elsewhere can’t really appreciate the ferocity of antigovernment and especially anti-BP feelings along the Gulf. Anyone touched in any way by BP is seen as irredeemably tainted.

During a Coastal Recovery Commission public forum in the seafood harvesting and processing town of Bayou La Batre, several speakers questioned the independence of the scientists who were telling them that Gulf seafood was safe.

“Which scientists do you trust?” said one man who identified himself as a fisherman. “Has that scientist been paid by BP? The paper should specify whenever it quotes one of them. Does BP have to approve whatever a scientist says when they’re paying him? Are there strings on BP grant money?”

Another man said that someone should investigate which researchers are “on the take,” meaning “getting money from BP.” In private conversations, characterizations can be much less polite.

At both the Gulf Coast Ecosystem Restoration Task Force meeting in Pensacola and the Coastal Recovery Commission public forums, some fishermen and others in the seafood industry said they personally see contaminated fish and shellfish, and wouldn’t eat Gulf seafood. Such anecdotal assertions are impossible to verify but, to many, very persuasive.

As for local governments, they may unite against such perceived common enemies as BP and the feds, but rivalries sometimes lead to disagreements that jeopardize resiliency and recovery efforts. At the Bayou La Batre meeting, Mayor Stan Wright said, “We need to all work

together.” But he also made a pitch for more money to be funneled to south Mobile County, saying, “I feel there’s some favoritism of Baldwin County.” Meanwhile, some in Baldwin have said their county deserves the bulk of – or even all of – any restoration money because its tourism industry was hardest hit by the spill.

Data and monitoring

We don’t have nearly enough data about the ecosystem. We need baseline data before a disaster, so we know what we need to restore to. And we also need a baseline for improving the health and resiliency of the environment, so we can measure our progress.

For scientists, data is mother’s milk. And, largely because of budget constraints, Gulf Coast scientists are on a starvation diet. There simply hasn’t been nearly enough monitoring equipment deployed. So we only have an incomplete picture of the Gulf’s water quality, the condition of the fisheries and other aspects of the coastal Alabama environment.

When disaster hits, that lack of data leaves coastal Alabama flying blind. For example, the expected drift pattern for a spill is key information for those seeking to contain the damage. But when oil began pouring out of the Deepwater Horizon well, nobody knew where it would go because no instruments were in place to continuously monitor Gulf currents.

After the spill, Scripps researchers brought their instruments to the Gulf and provided valuable data on, among other things, the Loop Current, which some feared might carry the oil around the southern tip of Florida and into the Gulf Stream. Physical oceanographer Dan Rudnick told *ScienceDaily* that the Gulf needed a much broader array of permanent monitoring equipment in place. If the Gulf had a monitoring network like California’s, he said, scientists “would have had the observations from day one instead of day 30.”

Greatly enhanced data collection would help everyone from scientific researchers to the U.S. Army Corps of Engineers (which has permitting authority over wetlands and navigable waters) to fishermen. Ideally, all the Gulf data would funnel to a central repository that could aggregate the information and present it via a real-time, user-friendly interface.

Ecosystem

Already stressed even before the spill, the Gulf Coast ecosystem has only limited capacity to absorb further blows from either natural or man-made disasters. “This is a region,” says the Mabus Report, “that was already struggling with urgent environmental challenges, such as the loss of coastal barrier islands and marshes that protect coastal communities from frequent hurricanes.”

Infrastructure problems on land, ranging from inadequate wastewater treatment to a development-driven increase in pavement and other hard surfaces, contribute to stresses on the marine ecosystem through sedimentation, runoff of debris and nutrients, and introduction of pathogens and toxic chemicals.

Control of point-source pollution (i.e., pollution from a single, specific source) has been improving over the years. On the other hand, nonpoint-source pollution (from diffuse or multiple sources, such as runoff following a storm) may be increasing. Nutrients, toxic chemicals, sediment, debris and pathogens run off the land and degrade the marine ecosystem. Sediment smothers grass beds, which provide nurseries for fish and shellfish. Excess nutrients lead to oxygen depletion.

Buildings, paved roads, parking lots, driveways and other impermeable surfaces cause increased runoff. Pollutants, debris and sediment wash into Mobile Bay and the Gulf every time it rains. And, in coastal Alabama, it rains a lot. A 2007 study crowned Mobile as the rainiest city in the 48 contiguous states, with annual average precipitation of 67 inches.

Some unpaved surfaces cause problems too. According to Wendy Allen, executive director of the Fairhope-based Smart Coast, which advocates regional planning, Baldwin County has more than 600 miles of dirt roads. Covering them with pervious pavement (which allows some storm water to trickle through rather than run off) or otherwise stabilizing them to control their runoff would reduce sedimentation. “Putting in rock and packing it down works well, especially if you stabilize the banks with grass,” said Allen, who is a member of the Healthy Environment Committee.

“We have a climate which ‘blesses’ us with frequent and high-intensity rainfall, highly erodible soils and, particularly in Baldwin County, a topography that exacerbates erosion and sedimentation,” said Bethany Kraft, executive director of the Alabama Coastal Foundation and an advisor to the Healthy Environment Committee. “Controlling storm-water volume and velocity from sites would not only mitigate some of the negative impacts of the pollutants it carries into our waterways (nutrients, pathogens, etc.), but also prevent the erosion of our stream banks and protect people’s property values.”

It should be noted that coastal Alabama has only limited ability to control nonpoint-source pollution of its waterways. Better results would come from a regional or even national approach because the majority of polluted inflows into the Mobile Bay watershed come from agricultural, urban and suburban runoff outside Baldwin and Mobile Counties. In 2002, the Mobile Bay National Estuary Program, an organization dedicated to improving the entire estuary, created a Comprehensive Conservation and Management Plan for the entire estuary. Lack of funding has prevented most of the plan from being carried out.



Resiliency

What does a resilient coastal environment look like? In one sense, it's obvious: an environment that can return rapidly to normal following even a major disaster – natural or man-made. But what is “normal”? The already-degraded pre-spill state of the coastal environment? The unspoiled state that existed before human habitation? Most people would argue for something in between.

“It is not possible to restore the ecosystem to a pristine preindustrial state in the face of climate change and other uses of the coast,” says the Mabus Report. “The goal of the broader recovery is to reverse long-term degradation of the Gulf ecosystem’s health.”

In environmental terms, creating resiliency may be as simple as this: removing as many human-caused stressors as possible so that the Gulf ecosystem can exercise its remarkable powers of recovery.

Funding

The Healthy Environment Committee was not asked to identify funding sources. However, it does support

proposed legislation that would send money from Clean Water Act fines to spill-affected states instead of into a trust fund for future oil spills.

Moving Us Forward

Because the environment is so important to the physical, emotional, spiritual and economic health of coastal Alabama, the Healthy Environment Committee recommends an actionable, comprehensive, ecosystem-wide plan for ensuring its restoration and resiliency. The plan should encompass a wide range of environmental components, including storm-damage reduction, creation of fish and wildlife habitats, reduction of saltwater intrusion and restoration of human-use loss.

The U.S. Army Corps of Engineers has been developing such a plan, which it has dubbed the Alabama Coastal Resilience and Beneficial Use, Operation, Recovery and Restoration (ARBORR) plan. For ARBORR details, see Appendix. “This model has worked well in other places,” said Col. Steven J. Roemhildt, commander of the Corps’ Mobile District and a member of the Healthy Environment Committee. In fact, ARBORR is basically an Alabama version of the

ARBORR

Alabama Coastal Resilience and Beneficial Use, Operation, Recovery and Restoration plan (ARBORR)

GOALS:

Prevention of, recovery from and restoration following oil spills
Hurricane and storm damage reduction
Preservation of fish and wildlife
Reduction of saltwater intrusion

Prevention of shoreline erosion
Restoration of human use losses
Protection of other water-related resources



LINES OF DEFENSE:

Barrier islands
Mainland dunes and artificial berms
Coastal habitats (emergent tidal marshes, wet pine savannah, submerged aquatic vegetation, etc.)
Seawalls, elevated roads
Landward barriers, surge gates

IMPLEMENTATION OF COMPREHENSIVE PLAN:

Phase I Projects ●
(construction can be initiated within 6 months)

Phase II Projects ◆
(construction can begin in 1-2 years, after planning, engineering and design)

Phase III Projects ■
(long term; construction can begin within 3 years or later)

Other ▲
(nonconstruction aspects, such as education and research)

Note: ARBORR is a working concept and not final; projects shown on the map are tentative. The Corps stresses that it does not wish to push its full plan on anyone without listening to other voices.



Source: U.S. Army Corps of Engineers

Mississippi Coastal Improvement Program (MsCIP) that the Corps undertook in that state after Hurricane Katrina. (See sam.usace.army.mil/mscip.)

Many members of the committee enthusiastically support ARBORR, while some express reservations about

certain aspects of it. But the committee does agree that a comprehensive plan, whether it be ARBORR or something else, is essential for environmental restoration and resiliency efforts.

Specifically, the Healthy Environment Committee



recommends five major actions to substantially increase the area’s resiliency:

- Restore barrier islands and beaches.
- Achieve the optimal yield of each individual Gulf fishery (shrimp, oysters, individual fish species, etc.).
- Create a Coastal Environmental Management Council. The council would have a strong advisory role regarding proposed projects affecting the coastal environment and a mandate to develop a comprehensive coastal resiliency plan.
- Work toward having water throughout coastal Alabama that is fishable, swimmable and drinkable.
- Create a world-class marine and coastal institution – on the level of the Scripps Institution of Oceanography in California or Woods Hole Oceanographic Institution in Massachusetts – focusing on the Gulf.

Restore barrier islands and beaches

“From Florida to Texas,” says the Mabus Report, “continued erosion of the coastal barrier island system undermines storm protection for coastal communities, threatens the beaches that support the local tourism economy, and affects numerous species that rely on these barrier islands for habitat (e.g., Kemp’s Ridley and loggerhead sea turtles, numerous shorebirds, and the Alabama beach mouse.)”

Barrier islands act as the first line of defense against both natural and man-made disasters as well as against the effects of projected sea-level rise. Restoring the islands would be implemented under a comprehensive plan encompassing not only the addition of new sand – with renourishment as needed to replace amounts lost historically and through alteration of the natural littoral system – but also reestablishment of fish and wildlife habitat on the barrier islands.

Some members of the committee prefer to avoid renourishment. Instead, they favor placing material dredged from Mobile Pass where the sand can reenter the littoral transport system (the natural system that gradually carries sand westward along Alabama’s barrier islands).

Scott L. Douglass, a professor in the department of civil engineering at the University of South Alabama who has written a book called *Saving America’s Beaches: The Causes of and Solutions to Beach Erosion*, favors both.

“I recommend (and all the research indicates it is best to use) a two-phase approach,” he said. “One, put sand on the beach to restore the historic deficit and to provide all the benefits of a healthy beach and dune and barrier island system. Two, place all sand dredged in the future from the ship channel either directly on the downdrift beaches [west of the channel] or immediately offshore in shallow enough water so that it migrates onshore quickly and minimizes the long-term renourishment needs.”

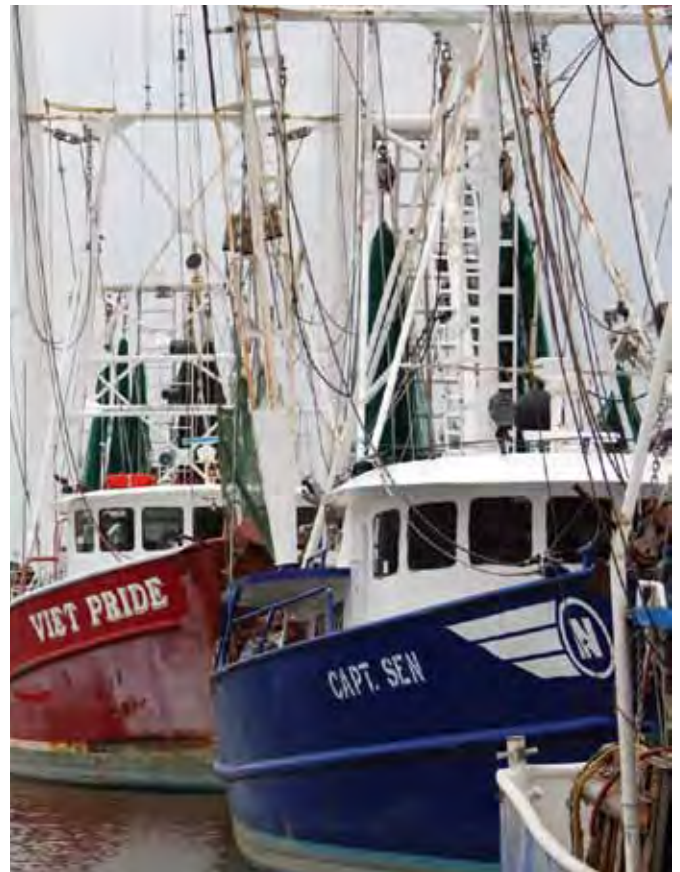
Such sand placement within the littoral zone will support natural movement of sand and sustain barrier islands. Restoration may also involve construction of dunes and other natural habitats on the beaches and in other coastal areas.

Barrier island restoration is part of the Corps of Engineers' ARBORR plan. ARBORR is based on the concept of "lines of defense." Starting at the water's edge, the lines are: barrier islands; dunes and artificial berms on mainland beaches; coastal habitats, such as emergent tidal marshes, wet pine savannah and submerged aquatic vegetation; seawalls and elevated roads; and landward and other protective barriers. (Some members of the committee oppose the use of some of these measures, particularly hardened structures such as seawalls.)

Restoring barrier islands and beaches will provide both environmental and economic benefits, including, in the short term, construction jobs.

Over a longer time period, such projects will enhance the tourism that the beaches and barrier islands attract. The islands will also protect billions of dollars worth of coastal property and infrastructure, and priceless marshes that serve as vital nurseries for a wide variety of marine and estuarine species. And they will help marine and estuarine fisheries by stabilizing salinity levels in bays, to the benefit of oysters and other important species.

All restoration efforts should align with other current and future projects in coastal Alabama and elsewhere along the Gulf through such agencies and programs as MsCIP, the Natural Resource Damage Assessment, the Gulf Coast Ecosystem Restoration Task Force, the Gulf of Mexico Energy Security Act of 2006 (GOMESA), the Gulf of Mexico Alliance (GOMA), the Mobile Bay National Estuary Program (NEP) and the Mississippi-Alabama Sea Grant Consortium (MASGC).



Optimal fishery yield

In this case, "fishery" refers to each separate species of finfish or shellfish that's harvested commercially or recreationally. There's an oyster fishery, a red snapper fishery and so on – dozens in all. Two agencies manage Gulf of Mexico fisheries. The Gulf of Mexico Fishery Management Council handles federal waters. Its rulings have the force of law, with the approval of the secretary of commerce. The Gulf States Marine Fisheries Commission, a compact of the five Gulf states, deals with state waters. Its conclusions are advisory, but the states involved generally follow the commission's suggestions.

The Healthy Environment Committee recommends working with those two bodies to help them achieve the optimal yield for each fishery. Such efforts would involve habitat restoration and enhancement, water quality improvement (discussed more fully below in the segment devoted to water) and improved data

collection. These measures should benefit all of the creatures that use the Gulf, including humans. However, we should make sure that efforts to boost yields of economically valuable species don't harm species that are of lesser or no commercial or recreational interest. The most basic thing we know about the environment is that everything is interconnected. Judgments based solely on monetary values can lead to dire (and ultimately costly) unintended consequences.

Different fisheries require different habitats. Which habitats we choose to restore or create can have major

consequences. For example, the optimum sea bottom for shrimp is smooth. The optimum bottom for reef fish contains lots of structures.

"The Katrina Cut is a perfect example of where we as citizens and humans have a choice," said Robert Shipp, chair and professor in the department of marine sciences at the University of South Alabama and a member of the Healthy Environment Committee. The cut, created in 2005 by Hurricane Katrina, sliced an 8,300-foot gap into the western end of Dauphin Island. After many delays and much discussion, it was finally filled

MINI GLOSSARY:

GOMA: *Gulf of Mexico Alliance; pronounced "go-muh"*

GOMESA: *Gulf of Mexico Energy Security Act of 2006; pronounced "go-mesa"*

Gulf Coast Ecosystem Restoration Task Force: *Federal agency (www.restorethegulf.gov) proposed by the Mabus Report and created on October 5, 2010, by President Obama. Its task is to coordinate oil-spill recovery efforts for the Gulf ecosystem.*

Gulf of Mexico Alliance: *A partnership of the five Gulf Coast states and 13 federal agencies, designed to increase regional cooperation to enhance the Gulf's ecological and economic health.*

Gulf of Mexico Energy Security Act of 2006: *A federal law that provides for sharing Gulf oil and gas lease revenues with Gulf producing states and the Land and Water Conservation Fund in order to finance coastal restoration projects.*

MASGC: *Mississippi-Alabama Sea Grant Consortium*

Mississippi-Alabama Sea Grant Consortium: *A federal-state partnership between NOAA and academic institutions in Mississippi and Alabama. The academic members are Auburn University, Dauphin Island Sea Lab, Jackson State University, Mississippi State University, the University of Alabama, the University of Alabama at Birmingham, the University of Mississippi, the University of Southern Mississippi and the University of South Alabama.*

Mississippi Coastal Improvement Program: *A set of construction and other projects, designed and administered by the U.S. Army Corps of Engineers, designed to strengthen Mississippi's coast against storms and other*

threats. It was created after the catastrophic damage caused in 2005 by Hurricane Katrina.

Mobile Bay National Estuary Program: *The Mobile Bay affiliate of the EPA's National Estuary Program, which is designed to improve the quality of U.S. estuaries*

MsCIP: *Mississippi Coastal Improvement Program; pronounced "miz-sip"*

Natural Resource Damage Assessment: *A federal process that assesses damage to natural resources from a spill of oil or other hazardous substances and restores the damaged areas to health. The parties responsible for the spill are required to pay for restoration.*

NEP: *National Estuary Program; in coastal Alabama, this refers to the Mobile Bay National Estuary Program.*

Northern Gulf Institute: *A research and education partnership between NOAA and five academic institutions, led by Mississippi State University and also including the University of Southern Mississippi, Louisiana State University, Florida State University and the Dauphin Island Sea Lab.*

NRDA: *Natural Resource Damage Assessment; pronounced "ner-duh"*

Renourishment: *The process of bringing in sand from elsewhere (usually offshore) to enlarge a beach.*

U.S. Army Corps of Engineers: *A federal engineering, design and construction management agency. Among its missions are environmental regulation and ecosystem restoration. The Corps administers the federal wetlands permitting program.*

in, with the work finished just a few days ago.

“If you leave the cut open,” Shipp said, “the increased salinity that comes into Mississippi Sound enhances the growth of seagrass beds. Those are critical habitat for a great many species. However, increased salinity also causes oyster reefs to be knocked out. It provides conditions that allow predators to come in and kill the oysters. That’s a choice we have to make. Personally, I think it’s better to protect the oyster reefs.”

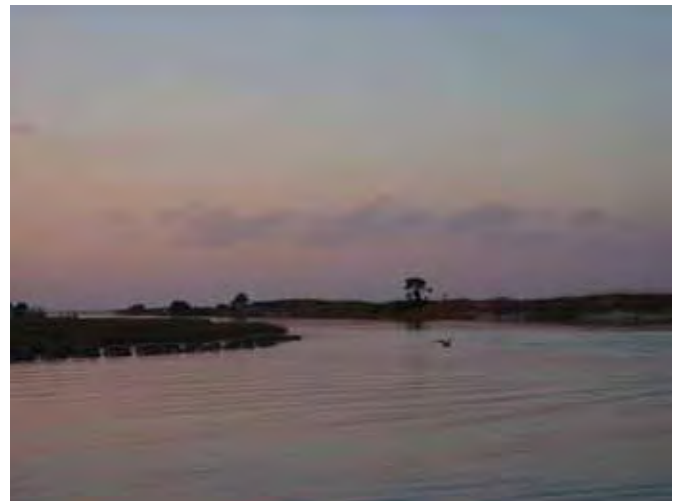
Improved data will help us make those choices wisely. The next segment of this report, dealing with the proposed Coastal Environmental Management Council, treats that subject in more detail. Specifically with regard to fisheries, the committee recommends that fishery-independent data be collected, as Alabama Sen. Richard Shelby also has been seeking, rather than fishery-dependent data. Simply put, fishery-independent surveys do not target any particular place or depth. Therefore, the data they produce are more reliable.

The committee also suggests that construction of flow-through bridges to replace sections of the Mobile Bay Causeway should be considered. Studies have indicated that this might enhance the populations of such species as white shrimp and speckled trout. An additional benefit would be the elimination of traffic problems caused by periodic water overflows onto the roadway.

Here again, we should proceed cautiously. “Some indications are that if you do that, you’ve got to really do it slowly because there are a lot of toxic elements bound up in the sediments north of the causeway,” said Shipp. Thus, it would be prudent to start with pilot programs rather than plunging headlong into a full-bore replacement project.

Coastal Environmental Management Council

The committee believes in comprehensive environ-



mental planning encompassing the entire Alabama Gulf Coast ecosystem. That’s where the Coastal Environmental Management Council comes in. Its job would be to look at the big picture. It would establish what it thinks a resilient coastal Alabama looks like and evaluate proposed construction projects to see whether they fit into that picture.

Details regarding the council’s makeup and selection would need to be discussed among the coast’s many stakeholders. Membership should be drawn from among local elected officials, governmental and non-governmental agencies and organizations, and the full spectrum of user groups. In order to earn public trust and to help bridge the gap between Mobile and Baldwin counties, the council must have the broadest possible representation and listen to all coastal constituencies.

In other words, the council shouldn’t make the same mistake that BP and the Coast Guard made in ignoring local advice and resources. It should involve local officials in its planning and decisions and avail itself of local expertise. For example, some of the best coastal “researchers” are commercial fishermen and charter-boat captains. They’re on the water more often than anyone else, and their livelihoods depend on how closely they observe the Gulf. Having them contribute to the council’s pool of knowledge simply makes sense.

POSSIBLE DECISION MATRIX

Resiliency requires comprehensive planning. And good planning requires a set of objective criteria – a decision matrix – that can be used to evaluate any proposed projects, especially construction projects. Here is one possibility that the Healthy Environment Committee discussed. For more about the concept, see “How Do We Choose?,” Chapter 10.

Each of the following factors could be assigned a point value, and the projects with the most points would be approved. Alternatively, each proposed project would have to receive a “yes” answer at all of the steps in order to be approved:

Project Selection Criteria

Project addresses at least two of the following long-term recovery goals:

- Prevention of, recovery from and restoration following oil spills
- Coastal resiliency
- Preservation/restoration of fish and wildlife
- Restoration of human use losses

Project has a Gulf-wide or regional (Mobile Bay) benefit rather than benefiting just a local area.

Project addresses the root cause of a problem or loss, not simply symptoms of the underlying problem(s).

Project addresses long-term restoration of our coastal way of life rather than just alleviating short-term hardships.

Project is technologically and economically feasible, and environmentally sound.

The council’s resiliency plan for coastal Alabama would have to include some form of region-wide “smart growth” land-use planning and probably building codes designed to provide resilience from hurricanes. (Those topics are addressed in other sections of this report, particularly in Chapter 8). “Green” building standards and transportation options would be considered. Much of the oil-spill mitigation funds will be restricted to environmental projects, according to recent news reports, so green initiatives would better position Alabama in the regional competition for those funds.

Here again, the council could avoid reinventing the wheel by building on regional plans created by such organizations as the Mobile Bay National Estuary Program and the Mississippi-Alabama Sea Grant Consortium. To view the Sea Grant’s 2009-2013 Strategic Plan, see the Coastal Recovery Commission’s website, cralabama.org.

The committee proposed that the council would screen and prioritize construction projects for implementation and/or suggest changes. “It’s not regulatory per se,” said Russ Lea, vice president for research at the University of South Alabama and a member of the Healthy Environment Committee. “It’s not going to levy fines.”

Instead, the council would play a super-advisory role, comparable to that of the North Carolina Coastal Resources Commission (CRC), with which Lea is familiar from his time in that state. “When there’s a permit that’s being considered, the CRC gets first comment on it,” Lea said. “They don’t have the right to kill a project, but you’ve got a big hurdle to cross if the CRC says your project is a dead project.”

Some committee members, notably representatives from the Alabama Department of Environmental Management, expressed doubts about the permitting oversight and some other areas of oversight proposed

for the council, preferring that more authority remain with local governments and existing state agencies. One suggested alternative was that the council simply advise local governments.

The committee also discussed the creation of a coastal land trust fund administered by the council. This would not be a primary funding source but rather be available to plug funding gaps so that worthy projects could go forward.

The committee discussed several possible matrixes, or decision-making tools, for use in examining potential projects. It ultimately did not recommend any specific matrix. However, see the sidebar story on the preceding page for one possible approach, a joint effort by committee member Curtis Flakes of the U.S. Army Corps of Engineers and Bethany Kraft of the Alabama Coastal Foundation.

In the event of a disaster, the council could act as a central point of public contact and a public information clearinghouse. It could also act as a liaison between state, federal or corporate authorities in charge of disaster responses and local resources: elected officials, groups and individuals with expertise to contribute.

The council, in conjunction with the proposed marine and coastal institute, would address the data shortages identified under “Vulnerabilities” above. It would work to put into place equipment and personnel needed to continuously gather and transmit real-time data for the Gulf of Mexico, Mobile Bay and associated waters.

The council would make sure that any new data, as well as data already being collected by various governmental and nongovernmental entities, would be aggregated in one central place – probably by partnering with the National Coastal Data Development Center (NCD-

MINI GLOSSARY:

GMRP: *Gulf of Mexico Research Plan*

Gulf of Mexico Research Plan: *A plan, released in September 2009, to identify and work toward meeting Gulf research needs. The Gulf’s four Sea Grant programs coordinate its implementation.*

National Coastal Data Development Center: *To support ecosystem management, the center collects national coastal and oceanic data from a variety of sources and makes it accessible via the Internet. It is a branch of the National Oceanic and Atmospheric Administration, housed at the Stennis Space Center in Mississippi.*

National Ocean Policy: *A coordinated system for managing America’s oceans, coasts and Great Lakes, established by President Obama in July 2010.*

NCCDC: *National Coastal Data Development Center*

NGI: *Northern Gulf Institute*

NOP: *National Ocean Policy*

Northern Gulf Institute: *A research and education partnership between NOAA and five academic insti-*

tutions, led by Mississippi State University and also including the University of Southern Mississippi, Louisiana State University, Florida State University and the Dauphin Island Sea Lab.

SECOORA: *Southeast Coastal Ocean Observing Regional Association*

Southeast Coastal Ocean Observing Regional Association: *A private entity that integrates coastal and ocean-observing data in the Southeast United States in partnership with other private entities and federal agencies.*

Stennis Space Center: *The John C. Stennis Space Center; a National Aeronautics and Space Administration facility in southwest Mississippi. It’s a major center for scientific data about the Gulf of Mexico. Its Gulf of Mexico Initiative provides NASA Earth Science data to assist environmental projects identified by the Gulf of Mexico Alliance.*

The Nature Conservancy: *An international conservation organization that works to protect ecologically important land and water areas, often by purchasing them.*

WATER QUALITY TIPS

To combat nonpoint-source pollution, the best solution remains the individual. Here are some tips from the Mississippi-Alabama Sea Grant Consortium:

Water conservation:

Use low-flow faucets, showerheads and toilets, and water-saving appliances such as dishwashers and clothes washers.

Repair leaking faucets, toilets and pumps. Use dishwashers and clothes washers only when fully loaded. Take short showers instead of baths and avoid letting faucets run unnecessarily.

Wash your car only when necessary; use a bucket to save water. Or go to a commercial car wash that uses water efficiently and disposes of runoff properly.

Household chemicals:

Many chemicals commonly used around the home are toxic. Select less-toxic alternatives. Use nontoxic substitutes and low-phosphate or phosphate-free detergents. Water-based products are best.

Buy chemicals only in the amount you expect to use, and apply them only as directed. More is not better.

Always dispose of used oil, antifreeze, paints and other household chemicals properly, not in storm sewers or drains. Take unwanted household chemicals to hazardous-waste collection centers. Never pour unwanted chemicals on the ground.

Always clean up spilled brake fluid, oil, grease and antifreeze instead of hosing them into the street.

Landscaping:

Select plants that have low requirements for water, fertilizer and pesticides.

Preserve existing trees, and plant trees and shrubs wherever possible. Minimize grassed areas that require high maintenance.

Unlike a concrete walkway, wood decking, bricks or interlocking stones allow rainwater to soak into the ground.

DC), an arm of the National Oceanic and Atmospheric Administration (NOAA) that is housed at the Stennis Space Center in Mississippi. The NCDDC website already includes an interactive, color-coded Gulf of Mexico map (ncddc.noaa.gov/website/CHP/viewer.htm) that can display data on subjects ranging from the locations of oil and gas platforms to the best places to fish for red snapper in December. Other websites that currently display Gulf information in similar formats include those of the Mobile Bay National Estuary Program (mymobilebay.com) and the Southeast Coastal Ocean Observing Regional Association (SECOORA; secoora.org/maps/interactive_map.html). To keep up with current consumer trends, such maps should also be optimized for smart phones, iPads and other hand-held devices.

Having such data centrally accessible in user-friendly form would help during disasters large and small. “If a boat called in a Mayday 25 miles off Dauphin Island,” said Lea, “which way would the survivors be drifting?” If real-time information on currents were available, rescuers would know.

When interactive coastal and ocean maps first went online in North Carolina, Lea said, “The biggest hits on data came from commercial fishermen and fishing guides. The temperature data helped show them where the fish were. You know who the wave-height user population was? Surfers.”

The availability of such data directly from monitoring equipment also addresses the issue of public trust. The information comes straight from scientific instruments, untainted by any associations with BP.

The council would align its efforts with those of other regional organizations and programs, such as the Gulf of Mexico Research Plan (GMRP), the Gulf Coast Ecosystem Restoration Task Force, the Northern Gulf

Institute (NGI), the Mississippi-Alabama Sea Grant Consortium, The Nature Conservancy, the Mobile Bay National Estuary Program, the National Ocean Policy (NOP) and the U.S. Army Corps of Engineers.

Fishable, swimmable and drinkable water

Frankly, this one is easy. Many coastal Alabama entities, both governmental and nongovernmental, have planned all sorts of projects that would improve water quality. We don't need to create any more agencies or any more plans, at least for a while. We simply need to fund the good ones (as determined by the Coastal Environmental Management Council) that are already out there.

For example, look at the Mobile Bay National Estuary Program, which is administered and funded – or underfunded – by the federal Environmental Protection Agency. The national NEP program is modeled after the highly successful Chesapeake Bay Foundation, which is a private-sector organization, headquartered in Annapolis, Maryland, that works closely with many public and private partners to improve the health of the Chesapeake Bay.

The Mobile Bay NEP updates its Comprehensive Conservation Management Plan for the Mobile Bay estuary every year. “We’re working with 14 municipalities to improve storm-water management,” said Executive Director Roberta Swann. “We’ve identified 123 projects. We don’t have the funding.”

Worthy projects run the gamut. Some would upgrade treatment of wastewater and other point-source pollution. Others would tackle the much more diffuse, and therefore more difficult, problem of nonpoint-source pollution, more colloquially known as runoff. Still others would deal with restoring specific waterways or watersheds, or with issues relating to groundwater. The Coastal Environmental Management Council would seek to move forward all that it found appropriate.

Incorporate landscaping techniques such as grass swales – low areas in the lawn – and porous walkways to increase water infiltration and decrease runoff. Gravel trenching along a drive or patio collects water and allows it to filter into the ground. Leave the clippings on the lawn. This reduces waste sent to landfills and recycles the clippings.

Do not overwater your lawn or garden. Overwatering may increase leaching of fertilizers to groundwater. Use slow-watering techniques such as trickle irrigation or soaker hoses.

Clean up after your pets.

If you use a lawn-care service, select a company that employs trained technicians and minimizes the use of fertilizers and pesticides.

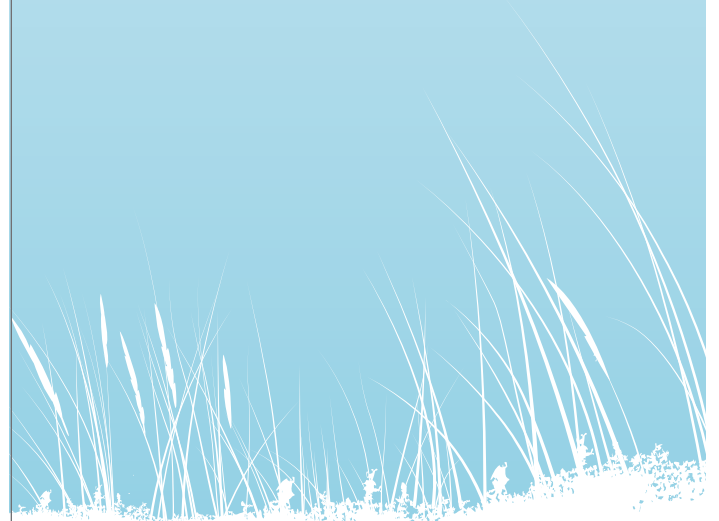
Septic systems:

Septic tanks must be pumped regularly.

Do not use septic system additives. There is no scientific evidence that biological and chemical additives aid decomposition in tanks; some additives may harm the septic system or contaminate groundwater.

Avoid or reduce the use of garbage disposals.

Decreasing water usage can help prevent septic systems from overloading.



The committee also recommends educating the public about the importance of clean water and about the steps that each person can take to have a positive influence on water quality. Individual actions, when added together in sufficient numbers, can have an especially significant impact on storm-water runoff.

The Alabama Department of Environmental Management classifies the state's streams, lakes and other bodies of water according to use. Those with the highest classification, "Outstanding Alabama Water," have the cleanest water, and ADEM attempts to keep them that way. The classification ladder has six other rungs, descending to the least-clean "Agricultural and Industrial Water Supply" (A&I) at the bottom. ADEM suggests that it's not practical or even desirable to attempt to make A&I waters, such as the Theodore Industrial Canal, fishable, swimmable and drinkable. It might be useful to prioritize water-cleanup efforts toward those bodies of water that ADEM ranks in its higher-quality classifications.

Marine and coastal institute

"Why do some states and areas have more leverage than we do?" V. Gordon Moulton asked the Healthy Environment Committee. (Moulton is chair of the committee and president of the University of South Alabama.)

"We have what I call a political-intellectual deficit," he continued. "Who do we have down here on the Alabama coast that anybody wants to listen to nationwide?"

The creation of a world-class marine and coastal institute would solve that deficit by giving Alabama a formidable science-based presence with a strong, authoritative voice that would be heard in Montgomery, Washington and the court of public opinion.

Such an institute could take many forms. It could be an academically focused body affiliated with one or more

ALABAMA WATER USE CLASSIFICATIONS (in descending order of water quality)

- Outstanding Alabama Water (OAW)**
- Public Water Supply (PWS)**
- Swimming and Other Whole-Body Water-Contact Sports (S)**
- Shellfish Harvesting (SH)**
- Fish and Wildlife (F&W)**
- Limited Warmwater Fishery (LWF)**
- Agricultural and Industrial Water Supply (A&I)**

According to the Alabama Department of Environmental Management: "Use classifications apply water quality criteria adopted for particular uses based on existing utilization, uses reasonably expected in the future, and those uses not now possible because of correctable pollution but which could be made if the effects of pollution were controlled or eliminated."

Source: Alabama Department of Environmental Management (ADEM)

Alabama universities (such as the University of South Alabama, Auburn University and the University of Alabama), and with other leading universities and research entities in other Gulf states, such as the University of South Florida, Louisiana State University and Texas A&M University.

It could take the shape of a "Gulf observatory" that would provide real-time assessment and data about what is going on across the Gulf at any one time. For a model, it could look to the Southeast Coastal Ocean Observing Regional Association (secoora.org), which describes itself as "the regional solution to integrating coastal and ocean observing data and information in the Southeast United States." SECOORA covers the Atlantic coast from North Carolina through Florida as well as Florida's Gulf Coast.

Or the institute could simply build on what is already one of the Alabama coast's prime intellectual assets, the Dauphin Island Sea Lab. The Sea Lab, on the eastern tip of Dauphin Island, is Alabama's marine



science education and research laboratory and has educational affiliations with all 21 of Alabama's four-year colleges and universities. Giving it a big boost in resources could be a cost-effective way of taking the lead in Gulf marine and coastal science; the Sea Lab already has moved a good ways toward that goal.

The institute's exact focus and functions would depend on its final configuration. It would certainly be heavily involved in gathering the kind of data needed to deepen our understanding of the land and water of the entire Gulf Coast ecosystem and to improve that ecosystem's resiliency. And it would certainly have a voice in shaping land-use and water-use policies, based on that data.

Such an institute would generate year-round economic benefits through high-salary jobs, infusions of grant money, influxes of students, visits from out-of-town researchers and its other routine activities.

However it may evolve, the institute would align its efforts with those of other agencies, initiatives and non-governmental organizations having an interest in the Gulf. Those might include, but are not limited to, the Gulf of Mexico Research Plan, the Gulf Coast Ecosystem Restoration Task Force, the Northern Gulf Institute, the Mississippi-Alabama Sea Grant Consortium, The Nature Conservancy, the Mobile Bay National Es-

tuary Program, the National Ocean Policy and the U.S. Army Corps of Engineers.

Conclusion

Obviously, many of these proposals generated a great deal of debate within the Healthy Environment Committee, and some continued to do so right up to and beyond the copy deadline for this report. That's good. We've gotten the conversation started about what we ought to be doing to create environmental resiliency on the Alabama coast. We need to keep it going – and turn words into actions. Because on the coast, no matter what the topic of conversation, it all comes back to the environment.

A complete list of proposals put forward by CRC committees and subcommittees can be found in the Appendix.

6 | A Healthy Society

BY JEB SCHRENK





Mental and Physical Health

When the oil spill washed into Alabama waters, creeping onto its beaches and into its wetlands, it was encroaching on a population already susceptible to natural and man-made disasters. Alabama is often ranked among states with the most at-risk populations in key components of community health and prosperity. And while the fishermen, service workers, boat builders and other residents of south Alabama are a resilient people, many earn lower incomes and experience higher health risks than their fellow Americans, making them more vulnerable to unforeseeable setbacks.

“National studies have indicated that south Alabama had significant health issues before the oil spill,” said Dr. Bert Eichold, Mobile County health officer. “The downturn in the economy, along with the direct impacts of the oil spill, have contributed to more people being forced into the social safety net and negatively impacting the health of the community.”

Even if the oil spill does not directly affect people’s physical health – and the verdict on that is still out until more studies can be done – job lay-offs and other indirect impacts affect the health of families and stress already over-burdened community health systems.

	ALABAMA	U.S.
Adults who have been told they have high blood pressure	37.20%	28.70%
Adults who have been told by a doctor that they have diabetes	12.30%	8.30%

Source: CDC’s Behavioral Risk Factor Surveillance System (2009)

	ALABAMA	U.S.
Population living in poverty	22%	20%
Median annual income	\$42,652	\$49,945
Medicaid enrollment	20%	19%
Infant mortality rate per 1,000 live births	9.1	6.8
Teen death rate per 100,000 population	93	62
Life expectancy at birth	74.6	78
Overweight/obese children	36.10%	31.60%
Child mortality rate per 100,000 children	23	19
Overweight/obese adults	65.90%	60.80%
Smoking among men	25.20%	20.70%
Smoking among women	19.30%	16.20%
Adults who visited the dentist	64.90%	71.30%
Violent crime rate per 100,000	449.8	429.4

Source: The Henry J. Kaiser Family Foundation
Data represents various years, from 2004-2009

“When individuals cannot afford medications or do not have access to medical treatment, early interventions for simple health problems cannot occur, and hospitals are forced to find a way to pay for the increase in indigent care,” Eichold said.

The Ripple Effect

At the Mostellar Medical Center in Bayou La Batre, visits by uninsured patients have doubled this year, while revenues from those same clients have been reduced by half. “They just don’t have the money,” said James Holland, Mostellar’s chief executive officer. “We’re obligated to see them. You can understand what kind of burden that’s going to be long-term.”

The impact is felt throughout the broader community, not just at hospitals and health-care centers. When basic needs are not met, for example, non-profit agencies at the front lines of disaster response are hit hard.

At the Bay Area Food Bank, which serves communities from the Mississippi-Louisiana line to Panama City, Fla., and north to Choctaw County, Ala., distribution from May through October, 2010, was up 25 percent from the same period the year before. Though it is difficult to distinguish the impact of the depressed national economy from that of the oil spill, food distribution in Mobile and Baldwin counties alone was up 31 percent. Some food that would have gone to northern distribution areas had to be brought down to the coast, according to the agency.

A Mental Health Crisis

If people’s physical health was not directly affected by the oil spill, their mental health was. Economic stress causes mental stress, and there was plenty of both to go around. In Baldwin County, a tourism season was lost. In Mobile County, the fishing industry effectively ground to a halt.

In late August, 2010, the Centers for Disease Control and Prevention conducted surveys in both south Mobile and Baldwin counties that suggested there were increased levels of depression and anxiety among

residents. Only two months earlier, in a high-profile case, an Orange Beach charter-boat captain shot and killed himself. The man, witnesses told investigators, had been upset about a loss in business.

Mental-health impacts include depression, severe anxiety and a sense of hopelessness, along with low self-esteem and self-worth. The result: increased reports of domestic violence, marital discord and substance abuse, said Robin Riggins, executive director of the Baldwin County Mental Health Center, one of the agencies responding to the crisis. People who can't pay their mortgages have been forced to relocate or move in with family members, and churches have reported that people can't even afford school uniforms.

The stress is difficult for people who are used to being in control of their businesses and lives. "This is not something they could have planned for," Riggins said, "not on the heels of two years of recession" and Hurricanes Katrina and Ivan before that.

The Alabama Department of Mental Health, with the help of a \$12 million grant from BP, launched outreach efforts in south Mobile and Baldwin counties to bring mental-health and social services to those adversely affected by the spill. People from the communities, especially those who are accepted and trusted within the various cultures and sub-cultures, have been trained to spot individuals who may be suffering mental-health problems and get them to mental-health professionals for necessary care, treatment and social support. The presence has been a welcome sight in a state and region that historically has been underserved in regards to mental-health care.

Mental-health professionals have expressed concern about lingering effects from the spill. Unlike a hurricane, which Alabamians have become accustomed to, the spill brought with it greater uncertainty and mul-

Alabama's Psychiatric Manpower Crisis
(per 100,000 citizens) in 2007

	U.S.	REGIONAL	ALABAMA
Psychiatrists	13.70	8.20	7.10
Psychologists	31.10	15.60	13.60
Social Workers	35.30	18.10	14.80

Source: Alabama Department of Mental Health

tiple impacts. Questions, many without easy answers, haunted individuals and businesses: When will the oil come ashore, and how much of it will there be? Will the seafood be safe to eat, and if so, will people eat it? Why hasn't my claim been approved while others have? How will my business ever recover?

More uncertainty and fear could arise in the spring of 2011 when residents will need to pay taxes on income from claims checks or BP work. That could be particularly unnerving for workers who typically conduct business through cash exchanges and who do not keep thorough records.

To affect long-term physical- and mental-health outcomes, changes to health care must be accompanied by prevention methods. And they must take into account ways in which the community may have enabled some of the vulnerabilities it must now overcome. To put it simply: Community health is about more than just delivering health services. It requires a broad range of interconnected strategies.

Public Health and Community Planning

Increasingly, public-health professionals are including community design – the way neighborhoods, transportation corridors, and public space are shaped – as a factor in achieving healthy society goals. The Centers for Disease Control and Prevention, the Environ-

mental Protection Agency, AARP, and other agencies and non-profits encourage land-use planning that expands choices for walking and biking. Making it easier for communities to grow and distribute healthy local food is another strategy growing in popularity. And, of course, reliable access to safe drinking water, waste-disposal systems, and healthy air quality are essential components of public-health programs.

The youngest, oldest and poorest segments of the population are particularly vulnerable. They're the most likely to be limited in transportation options and therefore isolated from services that might make their lives more secure. Isolation threatens mental health and robs the community from benefitting from the participation of all its citizens. With the Baby Boom generation aging into its retirement years, America and much of the world is about to be tested in their readiness to accommodate a population with expanded needs.

In order to become a healthier and more resilient community, south Alabama must take steps that will improve physical- and mental-health outcomes, strengthen infrastructure of the health-care system and give people opportunities to lead healthier lives. "As these resiliency programs are put into place, the



overall health status of the people of this region will substantially improve, greatly enhancing their capacity to withstand and overcome the physical and mental health effects of future disasters," said Dr. Ron Franks, vice president for health sciences at the University of South Alabama.

Proposals from the health subcommittee of the Healthy Society committee include:

Data collection

Organized information is key to resiliency. In regards to health, this effort must be multi-pronged. First, there need to be better collection and organization of physical- and mental-health data to better identify vulnerabilities and to form baselines for gauging effectiveness of programs.

Second, an electronic-records-sharing system among health centers should be implemented. The effort would mirror a national push striving for increased efficiency and cost savings. During a disaster, residents are uprooted and may require medical attention from a doctor unfamiliar with the patient's medical or prescription history. Health providers need to be able to quickly assess a patient's background, whether it's an elderly patient on a battery of medications or a

**ALABAMA POPULATION 65 AND OVER
2000-2005 AND PROJECTIONS 2010-2035**

2000	579,798	2020	892,632
2005	598,457	2025	1,037,842
2010	660,361	2030	1,163,999
2015	765,710	2035	1,237,274
CHANGE 2005-2035:	638,817	106.7%	

Note: Projections in this series are based on trends between the 1990 and 2000 censuses adjusted for trends in the Census Bureau's estimates from 2000 to 2008.

Source: U.S. Census Bureau and Center for Business and Economic Research, The University of Alabama, August 2009.

mental-health client who is unable to effectively communicate. Any collection of health data must be done while maintaining patient privacy.

Oil-related health testing

While it does not appear the spill will result in direct, long-term physical-health effects, more testing must be done. The state has developed a three- to five-year seafood-monitoring plan, and a proposal is being developed for ongoing testing of sand and near-shore water and sediment across the Gulf Coast. These studies will help ensure Alabama seafood and beaches are safe, and allow them to be promoted with confidence. A long-term study of human health effects will be conducted by the National Institute of Environmental Health and will focus on clean-up workers identified by BP and the Occupational Safety and Health Administration.

Disaster response coordinator

To better plan for unforeseen events, a position should be created for a regional disaster response coordinator for health issues. After Hurricane Katrina, a Mississippi recovery commission recommended a similar state-level position. The coordinator would be a liaison between health care providers, responding non-profits and government leaders during times of disaster. He or she would play a key role in strengthening exposed vulnerabilities, and the duties of the position would include:

- Establishing a mental-health response plan that includes staffing shelters with counselors.
- Coordinating with the state to ensure liability protection for visiting health-care workers.
- Organizing a plan/location for nursing-home patients to minimize the impact on hospitals.
- Carrying out coordinated disaster drills among the area's health-care centers.

The Alabama Department of Public Health has some

THE CENTERS FOR DISEASE CONTROL AND PREVENTION HEALTHY COMMUNITIES PROGRAM

"Today, chronic diseases affect almost 50% of Americans and account for 7 of the 10 leading causes of death in the United States. Chronic diseases and conditions such as heart disease, stroke, diabetes, cancer, obesity and arthritis cause suffering and limitations to daily functioning. Preventable health risk factors such as tobacco use and exposure, insufficient physical activity and poor nutrition contribute greatly to the development and severity of many chronic diseases."

"The CDC's Healthy Communities Program is engaging communities and mobilizing national networks to focus on chronic-disease prevention. Communities are working to change the places and organizations that touch people's lives every day – schools, work sites, health-care sites and other community settings—to turn the tide on the national epidemic of chronic diseases."

For more information:
cdc.gov/healthycommunitiesprogram

federal money set aside that could help fund the position as early as the beginning of next year.

Faith-based and business health initiatives

It's easy to reach people where groups gather. So south Alabama leaders should work with the governor's Office of Faith-Based and Community Initiatives to expand the reach of health education and disease prevention into Alabama's houses of worship. Community colleges could help train faith leaders in carrying out a program that focuses on education, healthy choices, chronic-disease management, first aid and mental-health issues. Certified participants would be trained in early detection of health issues and which government and private services are available for referral. They also could be trained to help distribute medications, food and other services during times of crisis.

The health disaster response coordinator could help launch this initiative with a pilot program in south Mobile and Baldwin counties. A similar program would educate business leaders on the importance of preventive health measures and what tools they can access to help keep their employees healthier and their insurance costs down.

Access to care

One way to improve health care is to increase its availability. For that to happen health-care centers and practitioners will need support. Increasing the number and hours of primary-care clinics accessible to low-income families would put a greater emphasis on preventive care and chronic-disease management and would take some of the burden off hospitals.

There are too few hospital-based mental-health beds in south Alabama and not enough residency slots for psychiatrists. Doctors generally end up practicing medicine in the same region where they train, so

HOW MUCH ARE HOSPITALS REIMBURSED?

The hospital wage index is an adjustment factor that helps determine the rates that hospitals in different parts of the country are paid for Medicare services. The national average is 1.00. Here's a breakdown of the index for some cities along the Gulf Coast, in the state, and of similar size to Mobile.

Tacoma, Wash.	1.122
Spokane, Wash.	1.0547
Augusta, Ga.	0.9553
Des Moines, Iowa	0.9481
Fayetteville, N.C.	0.9407
Grand Rapids, Mich.	0.927
Huntsville, Ala.	0.9033
New Orleans, La.	0.896
Tallahassee, Fla.	0.895
Gulfport-Biloxi, Miss.	0.878
Crestview-Fort Walton Beach-Destin, Fla	0.8732
Baton Rouge, La.	0.8691
Little Rock, Ark.	0.865
Birmingham, Ala.	0.8587
Montgomery, Ala.	0.8579
Pensacola, Fla.	0.8429
Pascagoula, Miss.	0.8141
Mobile, Ala.	0.7889

Source: U.S. Department of Health and Human Services

funding additional residency slots should increase the mental-health workforce in the area. Increasing the availability of hospital-based care – some patients are currently sent to Florida for care – should also attract more psychiatrists.

For both mental and physical health, scholarships requiring the recipient to live in south Alabama for a certain period would increase the number of health-care workers while adding good-paying jobs to the economy. Scholarships could also be made available to families affected by the oil spill.

South Alabama needs secure hospitals during disasters, but profit margins are tight. One way to make more money available across the hurricane-prone coast would be to create a multi-state Health Resiliency Zone supported by enhanced Medicare allotments. Reimbursement for Medicare care at hospitals in the region is generally less than what is paid to other hospitals in the country. That's because of a depressed hospital wage index, an adjustment factor that takes into account the salary of hospital workers in a given area. The wage index significantly affects hospital revenue. Mobile's wage index is 0.78. For coastal county hospitals, the index should be raised to the national average, or 1.00.



Increasing the index would free money to shore up hospital infrastructure and make them more resilient to storms or other disasters. While any increase would help all hospitals in the area, the University of South Alabama Medical Center and the USA Children's and Women's Hospital would not see as great of a benefit because they treat fewer Medicare patients. Steps must be taken to secure USAMC, the area's only Level 1 trauma center, which, like Mobile Infirmiry, is located next to low-lying Three Mile Creek.

Other programs could also be made part of a coast-wide Health Resiliency Zone, including:

HOW WILL A PROJECT AFFECT OUR HEALTH?

Residents don't need to wait until years after a proposal is implemented to determine how it may affect their health. Just like environmental impact assessments are done to determine outcomes such as air and water quality, a health impact assessment, or HIA, can be performed to test the potential impact of a project, policy or program. Such studies can provide recommendations to increase positive health outcomes while minimizing adverse ones that could be harmful. HIAs are regularly performed in Canada and Europe, and the practice is rapidly emerging in the United States, according to the CDC. For more information about HIAs and designing healthy communities, go to: www.cdc.gov/healthyplaces.

- Increased reimbursements for residency training, specifically for mental-health workers.
- Funding for programs targeted at reducing health disparities – adult and childhood obesity, diabetes, smoking, domestic violence, and alcohol and substance abuse.

New models of health care delivery coupled with new systems of reimbursement are expected to result in substantial changes to this region in the coming years. Among those could be reductions or shifts in hospital beds, increases in primary care and preventive services, substantial decreases in the number of uninsured, increases in the need for certain sub-specialty services with reductions in others, and significant shortages of health-care personnel as the overall demand for services increases. Critical to our success is ensuring that infrastructure enhancements and increases in health-care workforce are adequate to optimize our ability to withstand those demands, along with future disasters.

“As we review past disasters along the Coast, it becomes obvious that our health-care system must become more resilient in structure, capacity and quality,” said Dr. Ken Brewington, Mobile Infirmiry's administrator and chief medical officer.

Land use planning and healthy choices

If we want south Alabama residents to become healthier – thus more resilient to future disasters – leaders must pursue avenues that will give those residents opportunities to become healthier. One such avenue is to design and build healthier places and retrofit existing places that don't support healthy lifestyles.

In south Alabama, these goals can be obtained by promoting mixed-use zoning, walking and biking trails, environmentally friendly building methods, organic-food co-ops and community gardens, regional transit that connects rural areas with urban centers, and youth programs for recreation, drug education and pregnancy prevention.

Smart Growth strategies should be reflected in state practices and policies, and attention should be given to local measures that have already received approval, such as the city of Mobile's Greenspace Master Plan.

Land-use planning will be integral to insurance-reform efforts and ought to play a significant role in future economic and environmental planning.



Education

The impact of the BP oil spill on education in Alabama goes beyond the tax ledger.

To be sure, the decline in sales taxes was real and measurable. For May through September alone, the state estimated it lost out on \$116 million in Education Trust Fund revenue from along the Alabama coast. While that may give some indication of the effect on tax collections, here's the kind of impact it doesn't measure:

- Gate receipts from sporting events and other revenue from school activities at Alma Bryant and Theodore High Schools were down by about 25 percent.
- Projected enrollment this year at the University of South Alabama fell short by about 200 students.
- Snack bar revenue dropped 25 percent from last year at Elberta Elementary, while applications and approvals for free and reduced lunches were up.
- The University of Mobile had to commit resources to make sure prospective students from outside the area know that south Alabama is still a good place to go to college.

Since the University of Mobile is “a small private university with no direct government funding, each student lost as a result of this spill creates a sizable impact on our anticipated revenue,” said Brian Boyle, the school's vice president for development.

The impact on public education was made worse by a sluggish economy. The state's Education Trust Fund has undergone significant cuts in recent years: Alabama lost \$1.52 billion in state-collected taxes for education from fiscal 2008 through 2010.

The spill put added economic stress on students and their families. That’s one reason why getting back to school after the summer was so important. At Anna Booth Elementary in Irvington, Principal Lisa Williams said school has been a stabilizing factor in both the students’ and parents’ lives. She saw that effect after Katrina when families lost jobs and homes, yet parents succeeded in getting their children ready and back in school. The familiar routine and structure of school served as a comforting return to normalcy.

“I have such respect for the families in this community,” Williams said. “I cannot imagine another community with the work ethic evident here. I will never forget their resiliency and determination to recover after Katrina. Then for them to turn around and go through this, that just breaks my heart. I just want the recovery to be full for these parents.”

The school made sure it was prepared after the spill, with available supplies and uniforms for families who needed help. At the same time, school staff made sure it was flexible on enforcement of the dress code.

Getting Prepared

Preparation, then, is key to combating the vulnerabilities exposed during disasters. During Coastal Recov-



FINAL EXAM

How our high school seniors performed on the Alabama High School Graduation Exam

READING	STATE	BALDWIN CO.	MOBILE CO.
% Failed	6.44	5.33	6.22
% Passed	80.54	80.76	83.09
% Passed/Advanced	13.03	13.91	10.69
MATH	STATE	BALDWIN CO.	MOBILE CO.
% Failed	5.27	4.04	4.50
% Passed	73.41	71.69	79.15
% Passed/Advanced	21.32	24.26	16.35
BIOLOGY	STATE	BALDWIN CO.	MOBILE CO.
% Failed	5.98	8.24	10.55
% Passed	75.14	73.28	78.57
% Passed/Advanced	18.88	18.48	10.88

Source: Public Affairs Research Council of Alabama

ery Commission education subcommittee sessions, representatives from local universities and community colleges expressed some frustration that they were not completely ready for what followed the spill. There was an increased demand on the faculty’s time as impartial experts, missed opportunities to secure research grants or develop new expertise, and a break in the continuity of education for students who took jobs cleaning up oil.

Universally, those in education saw the need for greater collaboration and involvement in the community. With those steps, schools can better prepare themselves, their students and the rest of south Alabama to be more resilient.

“In our recent history, schools have been the stabilizing centers of strength for our communities that have been traumatized by hurricanes, tornadoes and man-made disasters,” said Carolyn Akers, executive

LEARNING THE BASICS

How our 3rd through 8th graders fared on the Alabama Reading and Mathematics Test, as measured by percent of students who tested at the highest level. *

	MATH	READING
State	41	51
Mobile County	43	50
Saraland City	44	55
Baldwin County	51	60

Source: Alabama Public Affairs Research Council

* Data from 2009-10 school year, representing test-taking students who scored at Level IV.

For more information about school performance, go to <http://parca.samford.edu>.

director of the Mobile Area Education Foundation. “We call on them to not only educate our future workforce and citizenry but to serve as disaster shelters. The job of schools and school systems is to graduate all students ready for college and work. Resiliency in the face of disaster is dependent on an educated citizenry that can adapt and be flexible enough to rebound through re-learning.”

Proposals for educational resiliency include:

Working Together in K-12

Whether a student goes on to college or directly to a job, K-12 education is the foundation for workforce development in southwest Alabama. To that end, school systems in Mobile and Baldwin counties should continue their efforts toward improving workforce training along with basic education emphasizing math and science programs enhanced by the use of technology. Workforce development should be done in collaboration with the two-year college system and the business community to identify needs and prepare students through combined programs.

One barrier to successful workforce development is a high student drop-out rate – about 45 percent in Mobile County. Programs such as the Evening Educational Options Program, EEOP, and the Drop Back

FOREIGN LANGUAGE CHALLENGES

Vinh Tran came back to Bayou La Batre in spring 2009 and began to immerse himself in civic life. He’s on the city’s library board along with the housing authority, and he recently took a job at Boat People SOS, a Vietnamese-American community organization.

He returned to his hometown after six years in the Navy because he liked the Bayou lifestyle – the slow roads, the fresh seafood, the work ethic and the tight-knit community. But it also took coming back to realize the effects of the language barrier between south Mobile County’s Asian and non-Asian communities. About a third of the city’s residents are Asian.

“My eyes really opened up,” Tran said. “I never knew these families were so vulnerable.”

The oil spill magnified those vulnerabilities. Information about the spill was slow to arrive within the Asian communities, and there were few translators at claims offices along with a lack of assistance at the call centers, said Grace Scire, the Gulf Coast regional director for Boat People SOS. Moreover, Southeast Asians were at a disadvantage in the selection process for the Vessels of Opportunity Program, she said.

“These populations are underserved,” Scire said. “At times, they’re just totally forgotten about.”

After the spill, said Scire, there was “a lot of confusion, a lot of anxiety, a lot of miscommunication.” The Southeast Asian population in south Mobile County is mostly Vietnamese, followed by Laotian, Cambodian and Thai, according to Boat People SOS, which works with Southeast Asian communities across the U.S.

Overall in Mobile County, the Asian population jumped from 1.4 percent of the population in 2000 to 2.4 percent in 2009, according to the U.S. Census. Meanwhile, the Hispanic population grew significantly in both coastal counties during those same nine years, from 1.2 percent to 2 percent of the population in Mobile County, and 1.8 percent to 3.3 percent in Baldwin County.

Almost five percent of residents in both counties live in homes where a language other than English is spoken.

Across the central Gulf Coast, from Alabama to Louisiana, there are an estimated 40,000 Southeast Asian residents, many of whom are in the fishing industry, according to Scire. Those populations need to be on the radar of local, state and federal government representatives, along with other decision makers. That means more than just translation of information – a basic need that is almost never done now, she said.

Funding for resources such as English as a Second Language classes along with money for on-the-ground organizations like Boat People SOS would help Southeast Asian communities gain better access to services and economic stability, Scire said.

The Business Support Center that opened in Bayou La Batre after the spill is staffed with interpreters. But if job applicants can't read or write English, "what are your retraining capabilities?" Scire said. "What is going to be done for the Southeast Asian population that needs to be retrained in other skill sets ... so they can go on and do other things?"

One way to clear that hurdle, Scire said, is to train people who are bilingual and bicultural in a certain skill – welding, for example – and have that person train the others. Using an interpreter "just doesn't work," she said.

The younger generation – the American-born children of immigrants – have been educated in American schools, have learned English and are accustomed to Western culture. They are people like Tran, who grew up translating for his parents. But Tran's path is not the usual one. Many younger Asian-Americans leave, looking for opportunities elsewhere. "I always wanted to come back," said Tran.

So he stays busy, not only translating for his parents, but for others, helping to fill a gap that needs greater attention and investment if communities like Bayou La Batre are to flourish again.

In Academies aim to reduce that number by allowing students to take computer-based classes at their own pace to earn graduation credits. There is a waiting list to get into EEOP, and, with funding, that program could be expanded to reach more students.

While each school system has unique problems and opportunities, increased collaboration among the systems will improve chances for overall success. Quarterly meetings among local school officials would allow staff to exchange ideas on shared goals and discuss their own experiences of what works and what doesn't. That collaboration could even extend to professional development, bringing in experts to work regionally with faculty and staff.

Such partnerships would become increasingly vital if the school districts in the county become more splintered. Saraland broke away from the Mobile county system a few years ago. Since then, Chickasaw has moved to create a separate school district, and Fairhope in Baldwin County also is studying the possibility.

Strengthening Skills for the Future Workforce

Soon after the spill, business support centers were opened in both south Baldwin and south Mobile Counties. As of the end of November, more than 470 individuals and businesses had been supported, with staff doing everything from helping an oyster shucker create a resume to participating in the launch of an aquaculture company that could employ over 300 people.

These two centers should be made permanent, and similar facilities should be opened across the two counties to respond during disasters and meet day-to-day growing workforce-development needs.

The centers would be operated through a community-college partnership involving the Alabama Technology Network, Alabama Industrial Development Training,

Faulkner State Community College and Bishop State Community College.

The centers would do more than simply place people in jobs during economic downturns, disasters or other unplanned events. They would prepare employers and employees before a crisis. This would include:

- Providing business-wellness services including small-business development and training, needs assessment, job placement and career-planning resources.
- Giving workers opportunities to diversify and expand their skill sets so they aren't as reliant on a single trade.
- Assisting businesses to create their own recovery and resiliency plans.

During times of disasters, the buildings could be used to provide workspace for responding agencies such as the Small Business Administration. The centers would also work to ensure responders and businesses have a qualified and trained workforce that is able to meet their needs. Data collection and management would be crucial to the business support centers' success.

Ideally, there would be at least three centers built in each county – in Bayou La Batre, west Mobile and north Mobile County in Mobile County; and south Baldwin,



BUSINESS SUPPORT CENTERS, BY THE NUMBERS

16 The number of staff members, full-and part-time, who work at the centers.

5 The number of languages spoken and translated by staff.

262 The number of businesses assisted .

208 The number of individuals assisted.

4 The average number of new intakes each working day since the centers opened.

3 The average number of times a client visits the center in person.

SOURCE: Business Support Center
(Numbers as of Dec. 1, 2010)

Robertsdale and Bay Minette in Baldwin County. By decentralizing the locations of the facilities, the centers can better focus on the employment and client needs of each area and be more immune to localized destruction during a crisis. Tourism would be a central focus for south Baldwin, for example, while shipbuilding is important to south Mobile County. There may be a need for Hispanic interpreters at the site in central Baldwin; in south Mobile County, there is a greater need for Vietnamese , Cambodian and Laotian interpreters.

Additionally, the multiple locations in Mobile County would help Bishop State Community College expand its reach into previously underserved areas. While Bishop has four campuses, each is located in Mobile east of Interstate 65 and north of Interstate 10. The college could use the new centers to hold classes.



Studying Resiliency

Some of the greatest tools for strengthening our community are right in our backyard. The area's colleges provide experts on issues that directly impact our economy and quality of life in southwest Alabama, so we should harness those resources through a Center for Resiliency Studies and Sustainability. The cross-discipline, multi-institutional facility would be a center for disaster preparedness, response, mitigation and data collection.

College students working with the institute could earn degrees or certificates in connected fields, and it would attract and train scientists for the purpose of building human capacity and expertise in resiliency and sustainability. The center would also serve as a repository of data gathered from its research. Research themes might include measurement of economic losses associated with disasters, climate change and weather

patterns, marine studies, mental- and physical-health strengthening, housing, water-quality management and economic development.

That research, though, would not be done in a vacuum. There would be direct connections between the center and the overall community. For example, political-science students might work with local governments to review public-policy initiatives for disasters; education and sociology students could help design lesson plans on resiliency for classrooms; and ecology and biology partnerships could be formed between colleges and high schools to examine the environmental impacts of contamination.

The center would transfer and exchange information with industry, business and the overall community through disaster preparation materials, Internet-based courses, symposiums and ready-to-use training packages. Its studies would not only be a resource for southwest Alabama, but would extend across the Gulf Coast region and would aim to attract national attention.

“The northern Gulf Coast is especially vulnerable to natural and manmade disasters,” said David Johnson, senior vice president for academic affairs at the University of South Alabama. “The region needs to have access to reliable and valid information and analysis to assist with disaster response and recovery. A center could coordinate the work of dozens of experts from colleges, universities, government and non-profits to help save lives and property.”



Public Safety

Near the beginning of the oil spill, when responders were laying boom between Dauphin Island and Fort Morgan to protect Mobile Bay, Baldwin County Sheriff Huey “Hoss” Mack took to the skies in a helicopter to help inspect the work and see how it was proceeding.

The trip was cut short, however. The Alabama Department of Public Safety helicopter had to be diverted to pick up an organ in Mobile and deliver it to a Birmingham hospital for emergency surgery.

The spill underscored pressing organizational, equipment and infrastructure needs for improved public safety in southwest Alabama. The helicopter, for example, is based in Fairhope but is owned by the state. Neither the Mobile County Sheriff’s Office nor the Baldwin County Sheriff’s Office, nor any of the municipal police departments in southwest Alabama, has its own helicopter or airplane. If one is needed when the Fairhope helicopter is elsewhere, law enforcement officials have to scramble for a replacement. More than once, Mack said, he has had to call in help from Escambia County, Fla.

Proposals for resiliency include:

The need for effective communication

Being able to easily communicate is a basic requirement for public safety. Police officers have to talk to each other; firefighters need the same capability. This is especially true during times of disasters – such as hurricanes and hazardous-material spills – or any times in which multiple agencies from separate jurisdictions attempt to collaborate in the same area.

Over the years, Mobile County has upgraded its communication systems to respond to that need. Almost all public agencies in the county are on the same system, and the city of Mobile police and fire departments – which use a different brand of software and hardware – are scheduled to switch over next year. Even with different operating systems, the agencies are able to communicate thanks to a permanent patch, or hard patch, linking the city to the county system. Baldwin County needs that same ability. Currently, dispatchers can link responders by a manual patch, or soft patch, but that is neither efficient nor fail-safe. Ideally, all public-safety personnel across the Gulf Coast region would be able to effortlessly communicate with each other.

“Baldwin County has 11 municipal police agencies, a Sheriff’s Office, an EMA facility, a 911 Center, EMS and 36 Fire Departments, which for the most part operate on different communication systems,” said Mack, “meaning they cannot communicate with each other efficiently if at all. Particularly in a county the size of Baldwin, it is imperative to the overall safety and security of its citizens for public safety to be able to communicate in an efficient manner.”

Secure Jail facilities

Jails built close to water present safety hazards for inmates, public-safety workers and even residents. In Mobile County, some inmates had to be furloughed during Hurricanes Ivan and Katrina because of Mobile County Metro Jail’s proximity to Mobile Bay and the



fear of flooding. Both Gulf Shores and Orange Beach have jails south of the Intracoastal Waterway.

To improve safety and efficiency, a south Baldwin County regional jail should be built farther away from the water. Such a pre-trial facility could be used by Orange Beach and Gulf Shores, along with other departments in the area, including the Foley Police Department. A regional jail, operated by the Baldwin County Sheriff’s Office, would reduce duplication of services and greatly lessen the need to transport arrestees from south Baldwin more than an hour north to the Baldwin County Corrections Center in Bay Minette. Currently, the Sheriff’s Office makes that trip twice each day.

It’s likely not financially feasible or practical to move Mobile County Metro Jail, but preliminary design work has been done to construct a dike around the facility to keep out floodwaters. An expansion including a mental-health wing is also needed – between 12 and 18 percent of inmates there are on psychotropic drugs. The jail and adjacent barracks have enough beds for 1,200 people, but typically house between 1,300 and 1,600 inmates. The Sheriff’s Office processes about 27,000 intakes a year – about 74 people each day.

“It is critical that we become more prepared to deal with the effects of flooding at the site of Mobile’s

Metro Jail, the safety and security of the 1,500 inmates housed there as well as the 250 employees who are dependent on improvements made to its infrastructure,” said Mobile County Sheriff Sam Cochran.

Safe Evacuation Routes, Safe Shelters

Construction is already underway to connect the Foley Beach Express with Interstate 10. Highway officials should continue with plans to extend the road to Interstate 65, opening a north-south corridor that would not only ease seasonal congestion on Alabama 59 but would also provide a much-needed hurricane evacuation route. While south Alabama needs safe evacuation routes, there also need to be secure and available evacuation shelters for those who cannot leave.

“The completion of the Express to I-65 will provide the essential north and south route, which can one day serve as a way to evacuate people from danger and the next as a way to provide rescue and aide to those who need it,” said Mack, the Baldwin County sheriff.

Research and Reform

Law enforcement agencies in Mobile and Baldwin counties work well with one another, demonstrated by monthly meetings held to share ideas and discuss common problems. A perpetual fund set up to pay for research of public-safety best practices, leading to improved training and policy reform, would take that regional collaboration to the next level. Some of that research could be conducted by local universities, involving students, faculty and staff who have a shared stake in the future of southwest Alabama.

A New EMA Facility

When state officials came down to south Alabama to respond to the oil spill, they operated out of hotel rooms until the Joint Unified Command Center was opened in office space on Downtowner Boulevard. That’s because the Mobile County Emergency Man-

agement Agency has outgrown its emergency command center on McGregor Avenue. There simply wasn’t enough room for everyone.

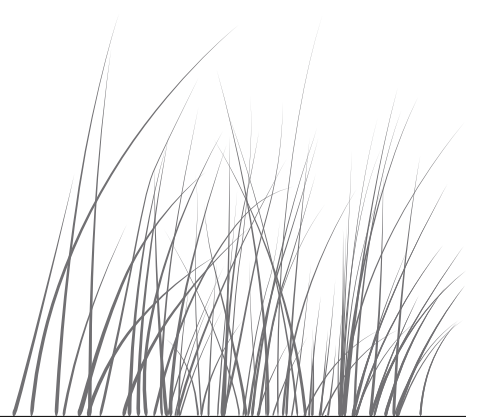
In recent years the county has proposed constructing a building to replace the 1950’s-era Civil Defense structure, but money has not been available. Preliminary architectural plans have been developed to locate a new Emergency Operations Center on city-donated property next to the Emergency 911 Center and the National Oceanic and Atmospheric Administration Disaster Response Center currently under construction. The EOC is the base of operations for the county during disasters, such as hurricanes and Hazmat incidents. As many as 90 people may pack the operations room during those times.

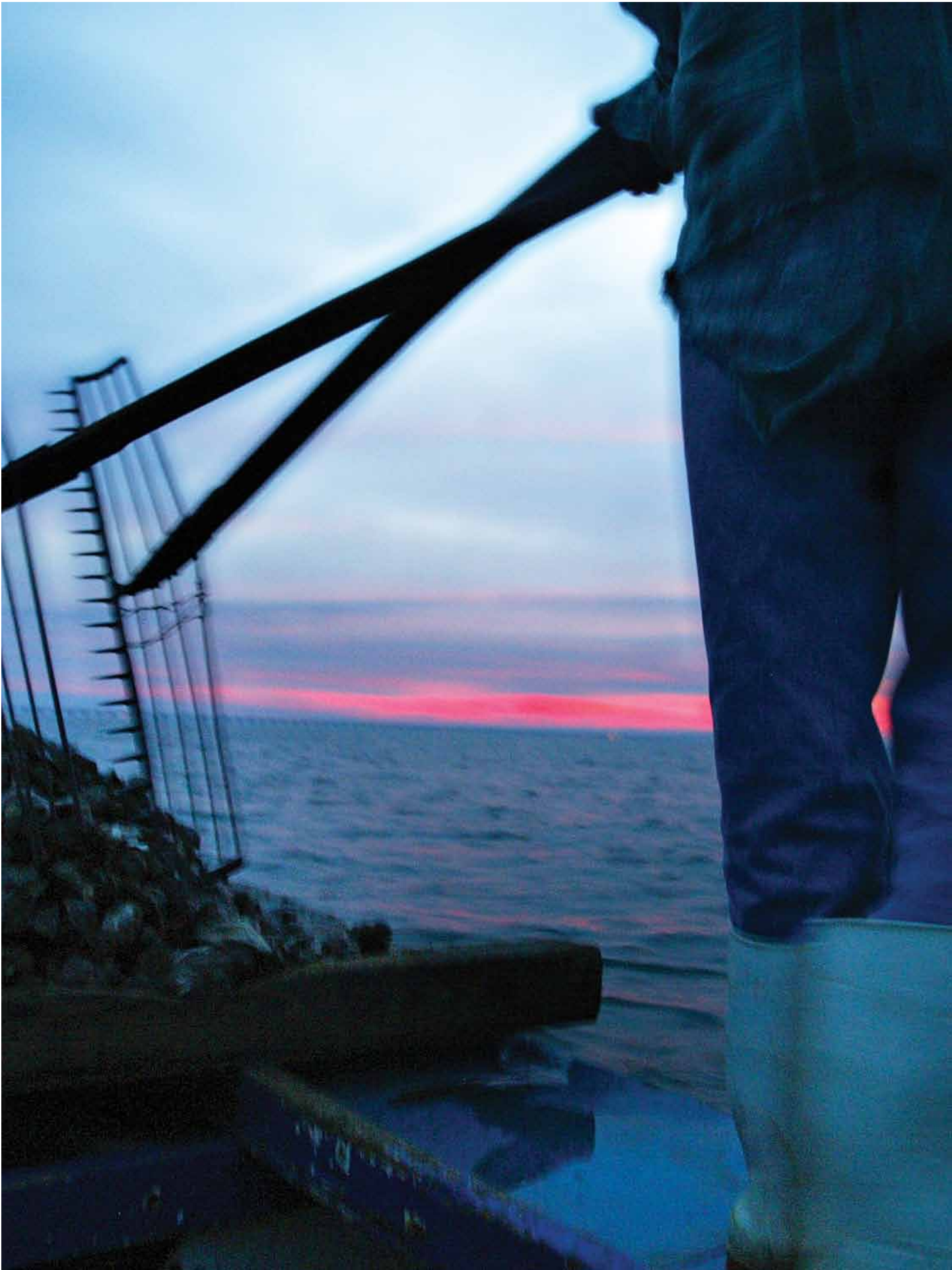
“The fire marshal knows that we are outside of the code, and he just looks the other way,” Mobile Fire-Rescue Department Chief Stephen Dean told the *Press-Register*. “We need more space.”

A complete list of proposals put forward by CRC committees and subcommittees can be found in the Appendix.

7 | A Healthy Economy

BY CHIP DRAGO





Seafood

Collier, Bosarge, Delcambre, Gazzier, Ladnier, Zirlott, Schambeau, Seaman. For generations these names have dotted the banks of the bays and bayous of south Mobile County from Fowl River to Portersville Bay. Those longstanding surnames are now joined by Nguyen, Huynh and Pham. Through the years, many of these families have earned their livings from the Gulf waters at their backdoor – pulling a shrimp trawl, tonging oysters off a nearby reef, mending a torn fishing net, picking a crab clean. Across Mobile Bay in the fishing village of Bon Secour, the names may be different, but the story is much the same.

An oil spill is only the latest threat to their way of life.

For years, oil rigs in the Gulf of Mexico, like pins in a cushion, fit easily among the fishing boats and shrimp trawlers, plying those waters for their share of the gulf’s bounty—the business of one seemingly indifferent to the business of the other.

Then, on April 20, 2010, life in and on the north central Gulf changed – perhaps more for the fisheries industry than the agent of that change, Big Oil. For three long months, oil spewed from the exploded Deepwater Horizon oil well 60 miles south of Louisiana, damaging BP’s image and earnings. Yet, if historical oil industry profits prevail, the red ink in BP’s ledger books could fade over time. On the other hand, the Gulf seafood industry – shut down for three months, its product now suspect and its market share nibbled away by competitors – may be left with a longer-lasting stain.

The Gulf's Fertile Fishery

Because of the estuarine influence of the Mississippi River, the northern Gulf of Mexico is one of the world's most productive commercial fisheries. According to the National Marine Fisheries Service, the Gulf produces 73% of the nation's domestically produced shrimp and 59% of its oysters. Dockside values in 2008 for the five U.S. states bordering the northern Gulf of Mexico exceeded \$661.4 million. More than half of this value is attributable to the shrimp fishery, which accounted for more than \$366.5 million in income to harvesters in 2008. Additional fisheries of major economic importance to the region include oysters (\$60.2 million), crabs



(\$58.5 million) and menhaden (\$64.3 million).

In Alabama, commercial fishing, seafood processing, and related industries accounted for some \$1 billion in annual revenues before the spill. The big question: Can those

2008 NOAA Commercial Fisheries Economics

State	Economic Impacts		Total Income Impacts	Total Job Impacts
	Total Sales Impact	Gulf %		
Alabama	\$445,449,000	4%	\$244,568,000	9,750
West Florida	\$5,657,246,000	54%	\$3,108,084,000	108,695
Louisiana	\$2,033,587,000	19%	\$1,059,617,000	43,711
Mississippi	\$390,702,000	4%	\$197,903,000	8,575
Texas	\$2,013,272,000	19%	\$994,140,000	42,541
Gulf Total	\$10,540,256,000			

2008 NOAA Recreational Fisheries Economics

State	Economic Impacts		Trips	Jobs
	Sales Impacts	Gulf %		
Alabama	\$455,093,000	4%	1,671,081	4,719
West Florida	\$5,650,068,000	47%	16,928,072	54,589
Mississippi	\$382,778,000	3%	968,800	2,930
Louisiana	\$2,297,078,000	19%	4,540,890	25,590
Texas	\$3,288,135,000	27%	1,337,146	25,544
Gulf Total	\$12,073,152,000			

Alabama Processed Products Summary

Product Category	5 Year Mean (2005-2009)		Calculated Live Weights
	Value of Product	Pounds of Product	
Crab Products	\$17,370,258	4,197,421	29,969,589
Fish Products	\$2,590,864	813,569	2,440,706
Oyster Products	\$23,457,252	4,135,085	53,756,102
Shrimp Products	\$75,334,425	25,786,659	51,573,318
Alabama Total	\$118,752,799	34,932,734	137,739,715

industries survive this latest threat and overcome what were already challenges to its long-range sustainability?

Threats to Alabama Seafood Industries

Initially, the closing of much of the Gulf's most productive fishing waters, including key shrimp and oyster fishing areas, pushed prices higher. But as media coverage of the spill saturated the airwaves and supplies dwindled, worries among buyers that they wouldn't be able to get enough Gulf seafood turned into worries that products from the Gulf might be unsafe at any price.

In the post-spill panic, as the possible extent of the spill's damage sank in, oyster prices soared 10% to 20% in the span of two weeks, according to Chris Nelson, vice president of the Nelson family-owned Bon Secour Fisheries in Bon Secour, Ala. Because of the spill, fishermen couldn't get to typically productive areas. Bon Secour's oyster supplies dropped by 30% to 50%, Nelson says. The company's 100 employees did not know week-to-week how long their jobs would last.

"This has had a severe impact on me, and it could be long-term if I lose market share that I have to scrape back," Nelson said.

Competition in the shrimping segment of the seafood industry illustrates the problem. Shrimp is a favorite among U.S. consumers. But more than half the shrimp consumed worldwide is farmed, with the majority cultivated in Asia and Latin America, a market valued at \$20 billion per year.

Landings from state waters alone cannot sustain a viable seafood processing industry of Alabama's size. As a result, Alabama seafood processors handle

SAFE HARBOR

During the Gulf shrimping heyday of the late 1970s, large shrimp trawlers tied off three abreast along the Bayou la Batre. Back then, when the local community gathered to celebrate its cultural and economic ties to the sea at the annual Blessing of the Fleet, the archbishop would bless quite a collection of working boats on a sweltering Sunday in May.

Time, incident and a whole by-catch of reasons have reduced the shrimping fleet, but as much as their dwindling numbers, the docks that accommodated those vessels have vanished with less notice. Population growth and economic development have come at the expense of commercial-fishing dock space. If the need wasn't already apparent, 2005's Hurricane Katrina brought it into relief. Exposed to the storm winds, many vessels broke loose from their moorings. Some sank. Others were driven up into the wetlands, damaging the boats, other property and the wetlands themselves.

A state-of-the-art "safe harbor" facility could safeguard the fleet, protect sensitive ecological habitats and attract fishing vessels that homeport in other Gulf Coast states to unload their catch with Alabama processors. This would help Bayou La Batre live up to its boast of "Seafood Capital of the Deep South."

Authorities in south Alabama have sought a \$500,000 grant to study the proposal which supports the Public Access and Sustainable Land Use Planning objectives of the Mobile Bay Estuary Program Comprehensive Conservation Management Plan. It conforms to the Sustainable Coastal Community and Hazard Resilient Coastal Communities Focus Areas of the Alabama-Mississippi Sea Grant Consortium Strategic Plan. And the idea is consistent with CRC strategies to preserve south Alabama's seafood-industry traditions, while assuring safety for workers and property and protection for the coast's natural environment.

OYSTER FARMING: A SUPPLEMENTARY INDUSTRY?

Mobile Bay and its surrounding waters once teemed with oyster beds. But the reefs where the oysters flourished gradually succumbed to runoff from growth in the flood plain and other manmade and natural events so that only a fraction of the previously harvestable reefs remain.

Reef restoration and seeding could help the oyster fishery rebound in Alabama waters, thanks to the efforts of organizations such as 100-1000 Restore Coastal Alabama. So, too, could a new wrinkle – oyster farming – thanks to the work of individuals such as scientist Bill Walton. On Dauphin Island, scientists at Shellfish Laboratory continued their experiments with oyster farming as the oil spill unfolded in nearby waters. Never intended to replace wild oysters tonged off the nearby Cedar Point reef, farmed oysters could supplement the wild catch and help keep south Alabama oystermen and their struggling fishery afloat.

According to scientist Bill Walton at the Auburn University shellfish lab, oyster farming has not caught on in local waters as it has elsewhere, but it could be the boost that keeps Mobile Bay area oystermen in business.

Oysters are particularly susceptible to salt water – more specifically to the oyster drill that arrives when fresh water from upstate rains is slack. If the waters over oyster beds are too salty, oyster drills thrive. And a thriving oyster drill population is bad news for oysters and the folks who make their living raking them up. A small member of the conch family and the oyster's chief predator, the drill climbs onto an oyster, secretes an acid and chews through the weakened shell. It then inserts its straw-like mouth to slurp the oyster from its cozy home.

But oyster farming can defeat the predator. Oysters are suspended in wire cages about waist deep in waters just off the coast near Point Aux Pins in south Mobile County.

landings of fishery products from other states and import substantial quantities from foreign countries to keep their plants operating at capacity. Almost 70 percent of the seafood products consumed in the United States (90 percent of the shrimp) are imported, resulting in a trade deficit of more than \$9 billion. The rapid growth in imports of pond-raised shrimp from China and Southeast Asia – as well as expansion in Mexico and in other Central and South American countries – has rattled the Gulf shrimp industry.

The impact on jobs and the regional economy is dramatic. As a region, the Gulf's seafood industries in 2008 sustained almost 220,000 full and part-time jobs. Because of the ripple effect, the total economic impact of those industries approached \$6 billion.

All of that can begin to unravel with just one scuttled fishing season.

A Lost Season

Shrimp season begins in early May and remains productive through October. Shrimpers work four-to-six months each year to earn their entire year's wages. So the impact of a three-month closure of the fishing grounds is greater than it first appears; in fact, it can break a shrimper.

The idled shrimper creates a ripple in the economy. A broke shrimper might default on his boat payment. People working in other industries dependent upon fishing also feel the pain. The absence of shrimp caught leads to the absence of shrimp at the processing and packing plant. Restaurants that boasted locally caught seafood might be forced to buy cheaper imported seafood from Vietnam or China. The Gulf Coast fishing industry's competitive standing could begin to sag both nationally and internationally. Just one lost fishing

season could change the dynamic of the fishing village's society forever. If only those most financially secure hang on to fish the next season, individual fishermen could fade away and, along with them, the net builders, fuel-docks workers and marine suppliers.



Reclaiming The Gulf Brand

To ensure some semblance of the current culture of the Gulf marine fisheries industry, people must realize that regardless of where the seafood is caught, the home-ports of the boats that caught it or the location of the processors and distributors, the seafood is “Gulf” seafood. And “Gulf” seafood continues to be seen by many consumers as superior and worthy of a premium price, not unlike Wild Alaskan Salmon or Maine lobsters.

Alabama's seafood industry leaders understand the implications of this marketing strategy. As Nelson says, “If I process shrimp here in Alabama, caught by a Louisiana boat in Texas waters, is it Alabama shrimp? Louisiana shrimp? Texas shrimp?”

The natural conclusion: Gulf shrimp is Gulf shrimp, and the Gulf fisheries industries across all five states should band together to proclaim that Gulf shrimp is the best shrimp a consumer can buy.

Florida and Louisiana have long funded state seafood

According to Walton, assistant professor in Auburn University's Department of Fisheries & Allied Aquacultures and an Alabama Cooperative Extension System specialist, the oysters are similar to cattle in a pasture.

Spawned in a hatchery off nearby Cedar Point and Heron Bay, the oysters are placed in the cages after they've grown big enough not to fall through the mesh. Not only do the suspended cages foil the oyster drills, they also serve to eliminate another obstacle to a successfully grown oyster. “Fouling” can occur when weeds or mud accumulate and suffocate the oysters. In their baskets, however, the oysters can be hoisted periodically and exposed to sunlight for a few hours, killing the seaweed without harming the oysters. The lifting apparatus could also come in handy in the event of another oil spill.

MARKET PRESSURE FROM FOREIGN IMPORTS

In recent years, supply hasn't been a problem for Gulf shrimp harvesters. Price has been an issue, however, with foreign imports helping drive prices to a new low. In mid-summer 2009, the market for head-on Gulf shrimp sagged badly, with processors paying low prices not seen since record lows in 2002 when hundreds of millions of pounds of shrimp imported from China, India, Thailand, Vietnam and Mexico flooded the market.

According to the National Marine Fisheries Service, total Gulf shrimp landings in May 2009 fell just shy of 16.3 million pounds, up from 10.5 million pounds in May 2008. In July of 2009, Gulf shrimpers were getting \$4.45 a pound for 16-20 counts, \$4.40 for 21-25s, \$4.30 for 26-30s and \$3.75 for 31-35s, all down from the previous year.

marketing efforts. Mississippi is revving up its seafood promotional push. And one of the immediate goals of the Coastal Recovery Commission is a proposal to create, by executive order of the governor, an Alabama seafood marketing board (see below). Together, these groups would be the logical and well-positioned forces to lead a regional campaign to rebuild confidence in the products of the Gulf of Mexico.

While BP's efforts to compensate the various sectors of the Gulf fishing industry have somewhat lessened the immediate blow, the industry remains at a crossroads, in need of a robust and sufficiently funded intervention to rebuild the Gulf brand so that customers lost during the spill can be reclaimed. The oil spill tripped up an industry that was already stumbling under the weight of other burdens, among them foreign imports, exorbitant fuel costs, flawed fishery stock assessments/management data collection, dwindling dock space and aging infrastructure and facilities. The industry needs a plan.

A Seafood-Industry Resilience Strategy

In recent years, the state of Alabama has undertaken a variety of restoration and conservation activities in its coastal areas, recognizing the significance of tax revenues generated through tourism in the coastal counties as a major contributor to the state economy. Barrier-island restoration is now seen as a priority for the state. The health of Mobile Bay, particularly the Mobile-Tensaw River Delta, has also drawn greater attention from the state. The Mobile River basin drains an area of nearly 44,000 square miles across Alabama, Mississippi, Tennessee and Georgia into Mobile Bay. Through the Forever Wild Program and other initiatives, the state has invested in land protection around the delta and is working to address water quality and nutrient pollution in the bay.

Many of the CRC seafood subcommittee objectives overlap with existing efforts to restore national confidence in Gulf fishery products. There is the Restore Coastal Alabama campaign to build 100 miles of oyster reef and restore 1,000 acres of coastal marsh and grass beds in the next five years. Mobile Baykeeper, the Ocean Foundation, The Nature Conservancy, the Alabama Coastal Foundation and the Coastal Conservation Association are working jointly to advance the volunteer program. The CRC seafood subcommittee has identified oyster-reef restoration and aquaculture as priorities for enhancing fisheries productivity.

To revive the fisheries industries – not just in Alabama but throughout the north central Gulf Coast – the CRC of Alabama seafood subcommittee made three major recommendations:

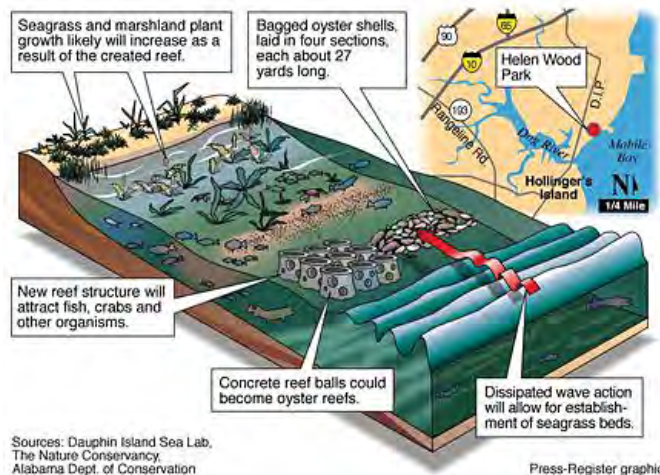
Creation of an Alabama Gulf Fisheries Marketing and Promotion Board.

The board’s objective would extend beyond the commercial fisheries industry to embrace a broad base of stakeholders in a healthy Gulf of Mexico and clean shores. The marketing campaign would seek to re-instill public confidence in the quality and safety of the Alabama product. Every effort would be made to coordinate the campaign with those of other Gulf states. As Nelson noted, Gulf seafood is Gulf seafood, and expensive campaigns that differentiate one Gulf state’s seafood from another are inefficient and possibly counter-productive.

Independent Seafood Testing.

More than anyone else, the fisheries industry wants to ensure that no oil-tainted seafood enters the food supply chain. Lingering doubts over the safety of Gulf seafood greatly threaten the industry and must be adequately addressed as quickly as possible. The CRC seafood subcommittee calls for continued cooperation

Group plans to construct oyster reefs and coastal marsh



with and utilization of governmental and academic officials, but also the introduction of “completely independent sampling and laboratory analyses” to eliminate fears of possible bias stemming from any financial considerations.

Modernization of the Fisheries Industries.

The already stressed industry recognizes two avenues for expanding its capacity for profit – increased sales and improved management. While neither is a guarantee of increased profits, the marketing campaign should lead to higher profits. And better management of existing businesses through modernization should likewise lead to healthier bottom lines. Through the AGFMPB, matching grants of up to \$250,000 would be offered to encourage innovative technologies to boost the competitiveness of the Gulf fishing industry against its non-Gulf rivals. Also, food-safety education and training programs would be implemented for commercial fishermen, the for-hire industry and seafood processors to enhance seafood safety and help sustain the resource.



PHOTO BY JEFF DUTE

Tourism

The perfect storm that collapsed coastal Alabama's hurricane-tested, tourist-dependent economy in 2010 was no storm at all. When the Deepwater Horizon oil rig exploded and began spewing oil into the Gulf, sunk with the rig were the season's financial fortunes for thousands of restaurants, lodgings, shops, attractions and services – few of whose operators realized how precarious their business plans were.

The area's hurricane history is extensive: The last three decades saw Fred-eric, Elena, Juan, Erin, Opal, Danny, Georges, Hanna, Ivan, Arlene, Dennis, Katrina and Ida. The frequency of hurricanes has increased in recent times, with a named storm now brushing or ruffling the Alabama Gulf Coast about every four years with direct hits about once every 12 1/2. Recent hurricanes have damaged the coast, depleting the reserves of residents and businesses, leaving them even harder pressed to fend off each new ordeal.

For the north central Gulf Coast, a hurricane is the devil it knows. Dealing with the 170-million-gallon oil spill was more like trying to catch smoke with a cast net. For three months, oil gushed into the Gulf. Daily, wide-spread news-media coverage wondered where the winds and tides would take the oil and whether it could be kept out of marshes and off beaches. The only thing to quickly become certain was the effect of the spill on the spring and summer plans of visitors to the Alabama Gulf Coast. They stayed away in droves. High hopes for the summer season of 2010 to bounce-back from the recent economic downturn faded with each day that the well head went uncapped. And, at last, fear met reality as oil arrived on the beaches and in the sea grasses.

Ultimately, the entire season was lost, an unprecedented debacle that exposed the fragility of an annual economy that relied almost entirely on visitors between late May and Labor Day.

South Alabama's Tourism Economy

Direct tourism spending in Mobile and Baldwin counties totals about \$3.2 billion per year. More than 40,000 people are employed directly and indirectly by the tourism industry in the two counties. Many, however, are either underemployed or work for hourly wages, conditions which make them especially vulnerable to industry crises. In a normal year, lodging revenues in Baldwin and Mobile counties were about \$375 million – or 36 percent of Alabama's total. In a state where property taxes are low and sales taxes are high, the hit to the private sector also injures local and state governments and school systems.

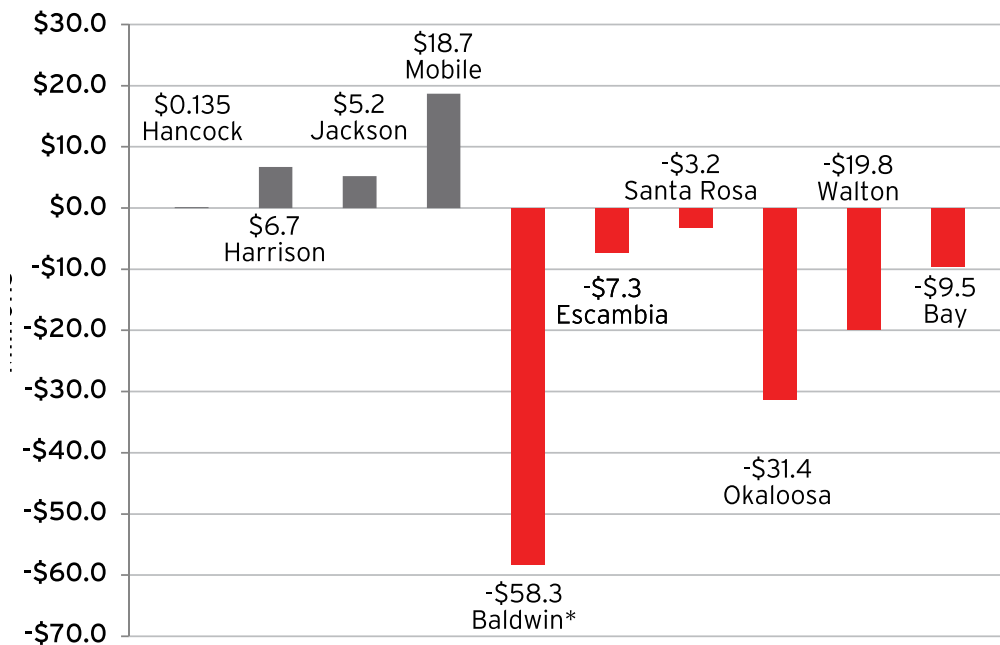
According to the Gulf Shores Orange Beach Tourism, taxable lodging rentals fell by more than half, from about \$30 million August 2009 to just \$14 million in August 2010. The year-to-date comparison through August reflected a drop of almost 30 percent. Condominium occupancy rates, which exceeded 67 percent

during the summers of 2007, 2008 and 2009, dropped by almost half in the summer of 2010.

Unsurprisingly, area attractions also saw sharp declines in their numbers. At the USS Battleship Alabama on Mobile Bay at I-10, executive director Bill Tunnell said attendance was off by 33,000 from June 1-Sept. 30, with lost revenues of more than \$500,000. Although attendance picked up in October, matching 2009 levels, visitors were still down 20 percent from pre-Katrina/Ivan levels, he said.

On Dauphin Island – known internationally in bird watching circles – a normally bustling summer tourist season stood still, according to Mike Henderson, executive director of the Dauphin Island Parks and Beach Board (an organization created in the 1950s to promote recreation and tourism). Henderson estimated attendance at Fort Gaines, a Civil War attraction on the island, was off 60 percent and house rentals were off as much as 80 percent.

Lodging Revenue May-August 2010



*Total loss for beaches = -\$64,278,920

Millions of tourists are drawn to Dauphin Island not for “the nightlife or roller coasters,” said Henderson. “They’re coming down to experience the beauties of a natural barrier island. That’s what is so scary about (the oil spill), because it’s impacted what is most important to us.”

Hurricanes are devastating, but more manageable mentally, according to Henderson, while the oil spill was an ongoing nightmare of the unknown.

Whether viewed through the hard data or the travails of any of countless small tourist-tied businesses, the Alabama Gulf Coast was especially hard hit, even compared to neighboring coastal areas. For the period from May-August, Baldwin County lodging revenue plummeted from more than \$175 million in 2009 to less than \$120 million in 2010, a freefall of more than 33 percent. No Gulf Coast county in Florida, Alabama or Mississippi suffered even close to the declines in Baldwin County.

Herb Malone, President/CEO of Gulf Shores/Orange Beach Tourism, said tourism was off by 50 percent during the area’s peak season, which accounts for 70 percent of annual revenues. The result? A loss of more than \$1 billion

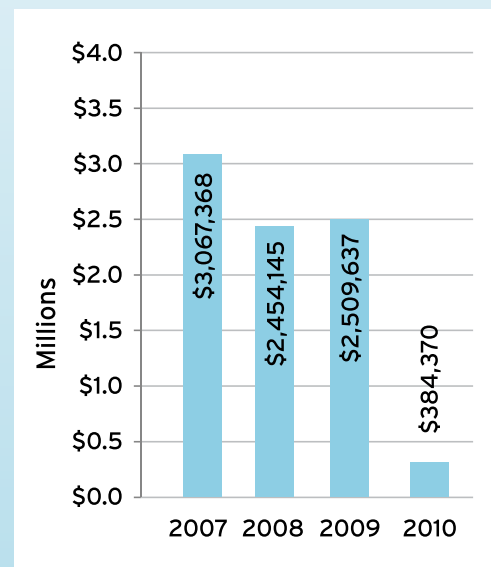
Despite its proximity to the spill, Mississippi will likely see little change in tourism numbers because its industry is tied to gaming more than sandy beaches. Any impact on beach-related tourism would be negligible in Louisiana which has few beaches. Only a fraction of the Florida coast was touched by oil, though all the Gulf states’ coastal economies were enveloped in the negative glare.

Becoming partners in misery has led some Gulf Coast states’ tourism leaders to ponder the prospects for a future partnership in prosperity. Overtures to align Gulf Coast tourism have begun.

THE IMPACT ON CHARTER BOATS

Although the competition is fierce to claim the title of “most adversely affected” by the BP oil spill, the charter-boat business on the Alabama Gulf Coast can make a strong case for itself. Waters worked by Alabama’s charter boats were closed to fishing June 2, just one day after the opening of Red Snapper season, and remained closed for almost the entire summer season.

Zeke’s Landing on Cotton Bayou in Orange Beach is home to much of the charter fleet on the Alabama Gulf Coast, including 29 off-shore boats, 10 near- or in-shore boats and one head or party boat. Here’s a chart illustrating the dramatic fall-off in the Zeke Landing fleet’s April-to-October revenue from previous years:



Many of the charter-boat captains found work for themselves, their boats and crews through BP’s “Vessels of Opportunity” program to guard the coastline and local waters from encroaching oil. However, according to Orange Beach charter-boat captain Randy Boggs, for the fiercely independent captains, such make-work and the need for financial help was unsettling.

"It was a job none of us wanted," said Boggs, who is among charter captains now attending weekly counseling sessions offered on-site by the Baldwin County Mental Health Center.

"They've been in a situation where they made a name for themselves," said Robin Riggins, the health center's executive director. "They called the shots, and that's not happening."

"A lot of them are grieving the loss of their business and they are trying to process that," she continued. "Their whole life has changed."

Tourism throughout Alabama is a huge industry; travelers spent more than \$9.3 billion in Alabama in 2009, according to state estimates. More than \$679 million of state and local tax revenues were generated by travel and tourism activities. Without those taxes, each household in Alabama would have had to pay \$391 in additional taxes to maintain current service levels, the state calculates.

Because the Gulf Coast generates such a significant percentage of the state's tourism business and because the state relies heavily on sales tax revenues, a hit there reverberates throughout Alabama

According to Diane Hite, agricultural economics professor at Auburn University, concern about the tax bases of the Gulf states' economies is warranted. And the sum of the wallop will be greater than the parts, she said.

"There's kind of a multiplier impact that happens," said Hite. "It's not just the one thing. People that go down there, they're not going just to go fishing, they're buying gas, maybe eating at McDonald's, so there is just a huge trickle-down effect."

In 2009, according to an Alabama Tourism Department report on the economic impact of Alabama's tourism industry, Baldwin and Mobile counties (the state's only two counties touching Gulf waters) hosted more than 7 million visitors who spent more than \$3 billion in the area – one third of the total tourism-related expenditures in Alabama.

Already battered by a recession and facing gaping budget shortfalls, Alabama is poorly postured to absorb the adverse effects of the oil spill on tax revenues from its Gulf Coast residents and businesses. In 2009, Baldwin and Mobile counties contributed, once again, more than a third of the near \$43 million in state revenues collected from lodging taxes, according to recent reports.



Few, if any, residents along Alabama’s Gulf Coast will ever take for granted a healthy Gulf of Mexico and coastal waters with clean sandy beaches. Their vulnerability to disaster naturally has residents considering ways to reduce their exposure to risk and to expand the region’s capacity for weathering a future blow, whether delivered by man or nature.

Bringing Back the Visitors

The lost summer of 2010 doesn’t have to become the new benchmark for south Alabama tourism. The beach lovers and the anglers will return. So will their economic impact on the region and the state, but not without a concerted, well-funded marketing effort to overcome the perceptions of oil-filled beaches and a poisoned Gulf.

In order to sustain a regional collaboration of the two coastal counties and help insulate their tourism economies from future threats, the tourism subcommittee recommends the formation of a Regional Tourism Council (RTC). The RTC would coordinate and align promotional campaigns as well as identify voids in the

region’s array of events, attractions and other activities likely to draw visitors year-round.

The immediate focus for such a regional council should be a well-funded marketing blitz to recapture market share lost in the wake of the spill. As described above and in other sections of this report, national perceptions of the impacts of the spill fed by sensational media coverage were out of synch with environmental realities. Those negative perceptions doomed the 2010 spring and summer tourist seasons and must be overcome to reestablish an economic sector vital to the region and to the state at large. The tourism subcommittee supports every effort to focus substantial portions of the BP fine penalty payments on reestablishing the beaches and Gulf waters of south Alabama as prime attractions. It’s a matter of fairness. And the effort would represent an important investment for long-term resilience.

For instance: Increasing promotional emphasis on the region’s appeal as an eco-tourism destination would not only correct misperceptions about the spill’s environmental damage, it would bolster a growing



PHOTO BY MICHAEL DUMAS

sub-segment of the tourism economy and build new relationships with individuals and groups interested in the coast's natural environment.

Lessons learned in the summer of 2010 should guide future event planning and marketing, as well. In late summer of 2010, BP-funded concerts and music festivals on the beach proved a hit. Thousands were drawn to the beaches, encouraging officials to plan future entertainment as a way of extending the summer season and allowing beach businesses to become less hostage to a four-month window in which to balance a year's books. Area native Jimmy Buffet appropriately launched Gulf Shores/Orange Beach as a concert destination. A later concert featuring Jon Bon Jovi was hugely successful as well.

While Dauphin Island isn't outfitted to handle the throngs that Baldwin County's beach communities can accommodate, its officials believe the island can fill a smaller concert niche and create for itself a bigger footprint in the sands of the Alabama Gulf Coast tourism market.

Reimagining Tourism

What would a more resilient south Alabama tourism economy look like?

Members of the Coastal Recovery Commission of Alabama's Tourism subcommittee have worked to answer that question.

First, it would be broader based, less dependent on families taking their summer vacation between mid-May and Labor Day. There would be greater coordination and collaboration among the tourism organizations and attractions of the entire area. Improved transportation infrastructure to better link communities and attractions would be developed.

One proposal for spreading the visitor season beyond the Alabama Gulf Coast's highly concentrated summers of feast or famine is the construction of a Gulf State Park Convention Center in Gulf Shores. According to proponents, who include both outgoing Gov. Bob Riley and incoming Gov. Robert Bentley, the facility would

expand the visitor market into the fall, winter and spring seasons. It would also introduce first-time visitors to the Alabama Gulf Coast, enticing them to return with their families on vacation. On Dauphin Island, the construction of a new conference center would serve a similar, if more modest, end. On the island's eastern tip, Fort Gaines stands within hailing distance of Fort Morgan, twin sentinels guarding the entrance to Mobile Bay. Traditionally, the island attracts a more sedate tourist clientele – history buffs, bird watchers, naturalists and fishermen. The Dauphin Island Sea Lab has developed as a big draw for students and others interested in the marine life of the Gulf and local waters. The small barrier island has significant potential to build on its assets and expand into a small-scale beach-vacation market, as additional infrastructure is introduced.

Local leaders now see concerts and festivals in the spring and fall as avenues toward a more diversified tourist-based economy that isn't quite so concentrated in the summer months. While Dauphin Island isn't outfitted to handle the throngs that Baldwin County's beach communities can accommodate, its officials believe the island can fill a smaller concert niche and create for itself a bigger footprint in the sands of the Alabama Gulf Coast tourism market.

A Regional Tourism Council was another major objective in order to sustain the regional collaboration of the two counties in dealing with adversity. The Council would serve to coordinate and align promotional campaigns, as well as to identify voids in the region's array of events, attractions and sports activities.

The disaster brought the various communities of the two counties closer. The goal remains to keep the lines of communication open. In fact, improved transportation infrastructure such as high-speed passenger ferries would link Mobile with the Eastern Shore and Dauphin Island and the beaches in Baldwin County. Success

locally may lead to interstate ferry traffic connecting nearby attractions on the Mississippi coast and Florida panhandle.



PHOTO BY MIKE KITTRELL

Small Business

Great expectations. All up and down the Alabama Gulf Coast, a respite from recent hurricanes and signs of an awakening economy had small-business owners and entrepreneurs looking forward to a profitable summer season in 2010. It might well have been the springboard to a run of financial success several years long.

In fact, many were banking on it—literally.

But the April 20 Deepwater Horizon oil spill hit the small-business sector of Mobile and Baldwin counties hard. A hurricane in later August or September is always a distinct possibility, but only after most of the summer season's take was in the books. However, an oil spill wiping out May-September revenues, leaving only expenses, came of out of the blue and sent hundreds of small businesses into the red. They went from bankable to unbankable almost overnight. Add a claims process that infuriated, exasperated and puzzled victims, and the small-business sector in Alabama's coastal communities was pushed to the brink. Great expectations gave way to ominous uncertainty.



PHOTO BY JOHN DAVID MERCER

Just as the Deepwater Horizon oil spill was a unique disaster for the Gulf Coast, it created unique challenges for each of the many coastal communities damaged in its wake. Funding to aid the recovery and address the current challenges also presents an opportunity to invest in the region and prepare for the next crisis. Whether that's a natural event like a hurricane or another manmade catastrophe like the oil spill, better economic resilience is needed.

Some of the hurdles for small businesses were urgent: compensation for immediate losses and income support to ensure survival. Gulf Shores Mayor Robert Craft said no small business should go under as a result of the oil spill.

"None," said Craft. "We can't go through 2011 like we did 2010."

Many small businesses struggled with the claims pro-

cess, unable to regain their balance and plan for the future. But some weaknesses in the region's economy pre-dated the oil spill, including under-employment and stagnant wages.

The local community, through the Coastal Recovery Commission's small-business subcommittee, has sought to assess the damages and weaknesses exposed by the BP oil spill and plot a course toward a sturdier small-business community, putting financial "safety nets" in place to ensure the survival of viable businesses that find themselves imperiled by forces beyond their control.

There's a good reason to pay special attention to the fate of small businesses. Often, they offer the widest range of opportunities to workers with the widest range of skills, including those with the community's most basic skills. Small businesses provide launching pads for entrepreneurs and innovators, seeding the future of a diversified regional economy. But many

mom-and-pop operations have limited access to capital and credit – and, perhaps, limited experience in financial management best practices. They are often the most vulnerable components of a community's economy.

In the case of an unforeseen trauma like the oil spill, the urgency of the situation escalates for businesses in low-income communities with language barriers, such as the Southeast Asian community of Bayou la Batre. Any delay in matching need with resources in such places doesn't just complicate recovery; it can kill it. There must be a navigational tool in place that enables the various federal, state and non-governmental resources to partner in relief efforts and to deliver timely and effective support.

For small business, fear and uncertainty can be lethal. With capacity and resources stretched thin, a community's ability to reassure the small-business sector can fail. Federal, state and local governments should mesh their resources so that wariness over investment within the small-business sector is minimized. Many small businesses along the Alabama Gulf Coast were already rattled by local events, such as the hurricanes of 2004 and 2005, as well as the destabilizing effects of national economic forces.

The run-away failure of small business could do more than the oil spill to deaden communities and the entire region.

Among the recommendations that have emerged for helping small businesses survive the oil spill and strengthen their resiliency from future challenges is a Revolving Loan Fund (RLF). The loan fund would serve as a central management agency to aid small businesses in the region whose financial capacity was diminished by the oil spill. Funded by oil-spill relief funds, the RLF and its board would serve as the hub

DISASTER BRIDGE LOAN PROGRAM

Help delayed is help denied for many small businesses whose cashflow is dammed by disaster, whether natural or manmade.

One of the critical components of the Coastal Recovery Commission of Alabama small-business subcommittee's proposed revolving loan fund is a Disaster Bridge Loan Program, which has saved businesses in previous disasters. For businesses operating with tight budgets and narrow profits, access to immediate operating funds in the aftermath of a disaster can make the difference between survival and going out of business. Insurance companies and federal authorities are often dealing with backlogs and inspections causing weeks- or months-long delays in reimbursement checks. Lending institutions following standard business guidelines that work in non-emergency times, likewise, can't act with the necessary speed to address the urgency of a small business's predicament.

Successful programs in past disasters have offered state-guaranteed, three- or six-month, zero-interest loans of up to \$25,000 to businesses with up to 100 employees. Officials work with banks across the region to target business owners in need of help. Local bankers contact their customers. Approvals are handled locally, shedding the process of much red tape and delay.



around which a suite of financial and educational programs was marshaled, ensuring the survival of small businesses brought into jeopardy by natural or man-made disasters.

Other notable suggestions emerged from the local business assistance community's War Room, which rose up to grapple with the emergency (see sidebar in "What Is Resilience?" chapter).

Among them:

- Institute banking policies and regulatory practices that give businesses affected by the crisis the ability to refinance existing debt.
- Institute policies that encourage investment capital into affected areas.
- Support programs that provide enhanced opportunities for small businesses in the state and the region to more effectively participate in the management of disasters by providing products and services that will improve self-reliance, enhance

overall disaster resiliency and accelerate economic stabilization.

- Create a system of Business Support Centers that consolidate federal, state and local business-support programs into one location.
Provide a Deductible Match Program – matching access to loans or grants with insurance deductibles.

The long-term challenges posed by the Deepwater Horizon oil spill are difficult to overstate. But the economic dislocation caused by the worst environmental disaster in U.S. history has unified many disparate elements from communities all across the Gulf Coast to cooperate in solving the problems exposed by the crisis.

Tax incentives to promote the region's economic recovery can be part of the answer. Tax-relief elements that garnered support from the subcommittee included tax deferral for small-business reimbursements that are reinvested in an oil-spill-recovery-zone trade or business. BP claims and business-interruption-insurance

proceeds paid to Gulf Coast small businesses should be deferred from income tax if the payment is reinvested in a trade or business located in the oil-spill recovery zone within six months.

Investment incentives to stimulate job creation in the oil-spill economic-recovery zone drew mention, specifically a special allocation of New Markets Tax Credits for the oil-spill recovery zone. New Markets Tax Credits are a proven mechanism for encouraging private-sector investment in targeted areas. Special allocations of the New Markets Tax Credit (NMTC) program were made following Hurricanes Katrina and Rita. A similar allocation, spread over a two-year period, should be made to the oil-spill recovery zone to contribute to the region's economic recovery.

A Gulf Coast lodgings tax holiday was advanced as a way to attract out-of-state visitors, helping offset the decline in tourism related to the oil spill. Federal assistance, however, would likely be required, since such relief would be difficult for cash-strapped state and local governments. Hotel and condo occupancy taxes contribute greatly to state and local governments in Alabama. Car-rental taxes are another major tourism-related revenue source, and Congress should consider providing reimbursement for revenue foregone as the result of the hotel and/or car-rental tax holiday.

Another possible small-business aid emerging from post-oil-spill deliberations is Alabama Governor-elect Robert Bentley's plan to install a cabinet-level director of small business in his administration.

According to the incoming governor, the post is intended to cut red tape and reduce government-induced frustrations for small-business owners and entrepreneurs. The small-business advocate would be charged with coordinating all available resources to encourage small-business growth. Tentatively, such a director would call a summit of small-business leaders

early in 2011 to assess the current climate in Alabama for small business, as well as compile "ideas from the real world of job creators" for consideration by the governor and State Legislature.



Long-Term Economic Development

Calvert and Dauphin Island are about as far removed as two towns in Mobile County can be – just as Bay Minette and Orange Beach are in Baldwin County – but all four communities should regard themselves as partners in the post-oil-spill recovering economy of the Alabama Gulf Coast.

Calvert is in extreme north Mobile County, and Dauphin Island is far to the south, attached by a bridge to the mainland it protects as a barrier against storms from the Gulf. Bay Minette is nearer the swampy river bottoms of north Baldwin, while Orange Beach is a condo-heaven in the county's sandy southeast corner.

Together Mobile and Baldwin Counties encompass nearly 3,000 square miles, and residents can go a lifetime without crossing paths. So why would the waitress at the diner in Calvert and the condo owner in Orange Beach ever see themselves as partners? Or, for that matter, a charter boat captain on Dauphin Island and the owner of a dry cleaner's in Bay Minette?

Well, the waitress has doubled her income since German steelmaker ThyssenKrupp began building its \$4.6 billion carbon-and stainless-steel plants in Calvert. Earlier this year, the carbon-steel plant brought on its 1,000th worker. When fully operational, the Greenfield facility will employ 1,700 workers and supply the NAFTA market with 4 million metric tons of carbon steel for manufacturers in the automotive, construction, pipe and tube, service center and appliance industries. Those steelworkers make good wages, keep the diner on Hwy. 43 busy and tip their hard-working waitress, who now earns enough money to afford an occasional weekend with her family at a condo in Orange Beach.

A similar scenario may play out in north Baldwin County in Bay Minette near a 3,000-acre industrial mega-site chosen by Hybrid Kinetic Motors, a Chinese/U.S. public corporation, as the location for a proposed \$3.2 billion automotive complex that could begin annual production of up to 300,000 hybrid vehicles in 2014. The facility could eventually employ up to 3,000. Construction is estimated to begin in late 2011 or early 2012.



Identifying and Reducing Vulnerabilities

The BP oil spill only underscored the theme of long-term economic developers everywhere – play to your strengths, identify potential, work to realize it, diversify the economy and be in position to open the door when opportunity knocks. The oil spill exposed some weaknesses in the economy of the Alabama Gulf Coast that can only be addressed through long-term economic development efforts coupled with a well-trained, more fully employed work force.

Tourism, seafood and related small businesses sustain the economies of south Mobile and Baldwin counties. In the past, they have been susceptible to disruption by hurricanes, but the oil spill – which lasted for months and continues to produce regional ripple effects – upset the economy, the environment and the society in ways more powerful than a hurricane.

Complementary efforts are underway across a variety of fronts to reduce the vulnerabilities inherent in a narrowly based seasonal economy. Many local workers reflect Alabama’s historical image of low-skill, low-wage jobs. As pressures limit personal potential, these

workers could benefit from the workforce development programs detailed in the Healthy Society section of the CRC report. These retraining programs could be key contributors in reducing the vulnerability of the coastal economies of south Alabama to the next crisis, reducing the dysfunction that engulfed many coastal communities. The CRC subcommittee on Long-Term Economic Development, in line with the post-oil-spill vision of many others along the Gulf Coast, emphasized economic diversification as the path to more jobs, greater wealth and a region less at the mercy of natural or manmade disasters.

Leveraging Investment for the Long Haul

The CRC subcommittee on Long-Term Economic Development recognized the importance of regional priorities when constructing a vision of a more resilient and substantially strengthened and transformed economy for the Alabama Gulf Coast. The area has enjoyed recent economic development success with numerous expansions at the Port of Mobile, including a highly promising container terminal, Austal Marine, ST Aerospace Mobile, ThyssenKrupp and Goodrich Aerostructures, with other strong possibilities in the automotive

and aviation sectors. These advances set the table for associated developments, creating a nucleus for dynamic opportunities for the region and its work force.

In many instances where the Mobile/Baldwin area scored significant victories in landing transformative projects such as ThyssenKrupp, the competition would not have been possible without the availability of funds to provide incentives for the company.

In the recent past, Alabama and its economic development regions have benefited from the Alabama Incentives Financing Authority, founded a little more than a decade ago to entice industrial, research, manufacturing and training facilities to locate or expand in Alabama. AIFA has a total bonding authority of \$300 million, most of which is committed to projects throughout the State. The state also has the Alabama 21st Century Authority for bonding purposes. These funds are also being used to help with projects.

Recognizing the value of such funding sources to induce potentially transformative projects, one of the CRC Long-Term Economic Development subcommittee's chief recommendations is the creation of a "dealing closing fund" for projects located in Baldwin and Mobile counties – or in close enough proximity to have significant direct affect on these counties. A board of experienced businesspeople would assess projects on their economic merits and offer attractive loans or grants to the prospect. Ideally, if the fund is sufficiently capitalized at the outset, it will sustain itself with accrued interest.

Its local stewards would be charged with guiding the fund to achieve diversity through investment in:

- Expanded export potential.
- Industries that match up well with the area's workforce and its ongoing training programs.
- The promotion of a clean-energy economy to sup-

port a Mobile Bay area lifestyle that hinges on clean air and water. Governmental support to encourage such initiatives is likely to be available in the coming year through the U.S. Department of Energy. Initial seed money has already been planted in the Gulf Coast through the Department of Energy's American Recovery and Reinvestment Act (ARRA) to advance green technology and green jobs as a major contributor to the Gulf economy in the 21st century.

- An emphasis on projects that drive the economic recovery in Alabama Gulf Coast communities that were hit hardest by the oil spill.

Other CRC Long-Term Economic Development recommendations include:

- The equal distribution of BP Penalty funds among the impacted states throughout whatever legislative and administrative measures the federal government deems necessary. The states themselves are best positioned to judge the actions that address the impacts of the oil spill in their communities. Furthermore, the CRC subcommittee urged that the funds be spent only in those counties that were directly impacted by the oil spill.
- The creation of a deputy chief of staff position in the Governor's Office to oversee and coordinate south Alabama's oil spill recovery and resiliency issues.
- Funding of a strategic planning process for the Alabama Gulf Coast that continues the coalition-building efforts of the CRC and comprehensive goals outlined in this report.
- Formation of a private-sector leadership council comprised of CEO-level business and non-profit leaders from Baldwin and Mobile counties. These regional leaders would be charged with pushing CRC goals, building consensus among the business and non-profit communities and conveying the message to political and governmental representatives at the state and federal levels.

8 Insurance

BY MICHAEL JOE





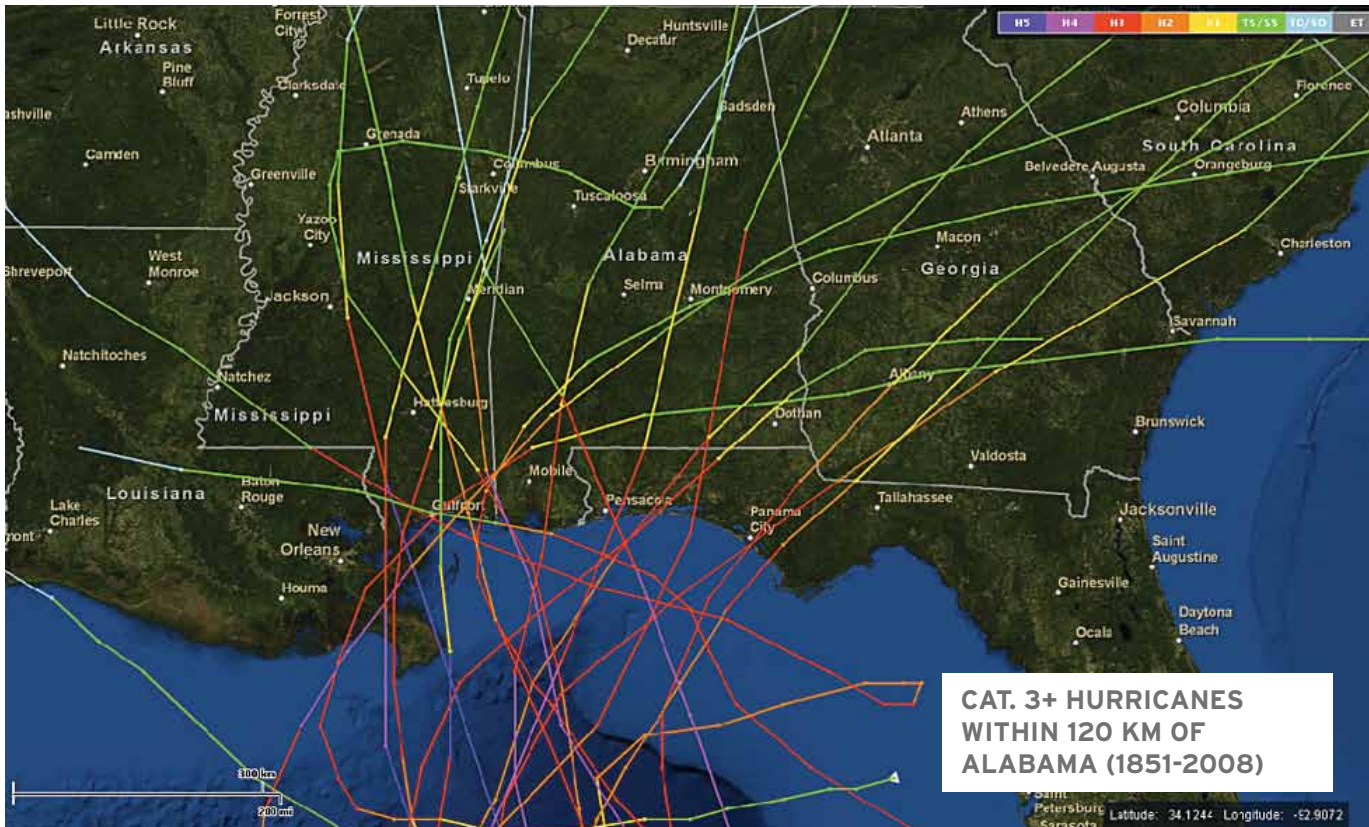
Insurance

Though a man-made event, the BP oil spill was a stark reminder of the risks that can come with living on the coast. The disruptive effects on the local community show the substantial price we can pay for the lifestyle we choose.

We have long enjoyed the benefits of coastal living and, as a society, thought we understood the risks associated with building along the coast. But recently, land values have increased exponentially, as have construction costs to build along the coast, the cost to rent or own the coastal property, and the value of the contents filling our homes. In addition, the rate of development in Alabama's coastal counties has been beyond the imagination of anyone except, perhaps, the most ambitious developer. The combination of increased development and more expensive development has raised the risk significantly – more than most people realized.

Rapid coastal development has been a national phenomenon. According to the National Oceanic and Atmospheric Administration, 270 people per square mile live near the nation's coastline, more than double the national average of 93. There are 8.5 million people who, aside from being exposed to the effects of hurricane-force wind, reside in the 100-year coastal flood hazard area – about 3 percent of the U.S. population.

Hurricane activity is cyclical. In the decades before 1995 we were in a period of reduced hurricane activity. In this current period of increased activity, we have repeatedly witnessed the destructive power of hurricanes. Combined with coastal growth, the return of this active hurricane phase does not bode well for communities situated along the Gulf Coast. Hurricane catastrophe models, including those used by the insurance industry, suggest that major hurricanes are not only more likely, but could cause far more damage than previously recognized. The future outlook is even grimmer with evidence of environmental climate change, which brings rising sea levels, warmer sea surface temperatures and uncertainty about how this will impact our coastal communities.



Hurricanes Ivan in 2004 and Katrina in 2005, in particular, changed the perception of risk in the region. In the aftermath of these catastrophes, the public and private sectors recognized they had underestimated the risks of living along the Gulf Coast. After significant losses sustained by insurers and reinsurers as a result of those storms, the insurance industry reevaluated its exposure to unsustainable risk and adjusted premiums to reflect the recalculation. That upward readjustment rekindled the debate – over strategies for coastal planning and development; over subsidies to achieve relative affordability for residents and business; and over mitigation to reduce risks and, therefore, premiums.

Achieving an acceptable balance of risks and costs for insuring coastal property is only possible if the responsibility is shared among property owners, government and the insurance industry.

Homeowners must try to toughen their homes, spurred

by governments who must adopt stronger standards for construction. The insurance industry also has a vital part to play, working together with individuals and government to form a three-pronged approach.

The recommendations submitted by the Coastal Recovery Commission’s insurance subcommittee can help stabilize the cost of insurance and even lower insurance premiums. This will help workers live closer to their jobs and save for their children’s education. It will help the coastal economy thrive. And it will help limit the number of people who are without property insurance or who are under-insured, reducing uninsured losses so that individuals and communities can recover more quickly from storms.

An Unsustainable System

Since Ivan and Katrina, coastal Alabama residents have struggled to find affordable, comprehensive insurance for their homes. A convergence of factors has led to the current situation, including model changes, fear of another storm, and demand for insurance exceeding available supply (although now in better balance). Since those storms, we have also seen the value of beachfront properties peak and then significantly decline in the last few years, which has complicated how insurance is priced. Underlying all these changes has been a marketplace consisting of small regional companies and a lack of competition.

Some insurance companies ceased writing insurance in the region or are now offering significantly higher premiums or deductibles, realizing the exposure and risk is greater than previously estimated. The most expensive and least available insurance in the private market is coverage for damage caused by wind. Some insurers have stopped offering wind policies on the coast or have instituted strict underwriting guidelines. More than 52,000 wind policies in Baldwin and Mobile counties have been dropped by insurers since Katrina, driving homeowners to purchase wind insurance with the insurer of last resort, the Alabama Insurance Underwriting Association (AIUA).

Other homeowners have obtained policies from “surplus-line” insurance companies that are unregulated by the State of Alabama; these non-admitted carriers offer higher-cost insurance but are important participants in a market with limited choices. And some homeowners are going without coverage; they are “functionally uninsured,” a category that includes homeowners who are going without a portion of property insurance, or may have comprehensive coverage but they do not have the money in the bank to pay their deductibles.

Should a major hurricane strike Baldwin and Mobile

counties, losses and claims are expected to be significant. Insurers that have continued to write policies in coastal communities may decide to significantly reduce their exposure or leave the coastal market if they cannot charge actuarially sound rates. Such a development would further diminish competition and consumers’ choices. The shrinking supply of insurance would have the added effect of moving more homeowners to higher-priced policies offered by the AIUA.

The number of homeowners with wind pool policies under the AIUA has grown substantially since Ivan, from about 3,500 policies to 18,865 as of October 31, 2010. Private insurers voluntarily helped create the wind pool in the early 1970s, and it exists to provide an option for owners of property along coastal Baldwin and Mobile counties who are unable to obtain coverage from private insurers. To limit interference with the private market, the wind pool generally charges insurance rates higher than the average rate offered by private insurers. Despite this, the pool’s share of coastal residential premiums and its number of policies have been growing since 2004.

Continuing this trend is a risky proposition. Should Alabama’s wind pool suffer large losses due to a storm, licensed insurers who participate in the wind pool will be required to cover losses above what would be paid by funds the AIUA has retained and has purchased in reinsurance to cover a 1-in-100-year storm (which has a 1 percent probability of being equaled or exceeded in any given year). Though the AIUA’s share of residential policies is smaller relative to similar insurance pools in other coastal states, the amount of losses for which some insurers would be responsible could result in their insolvency.

Licensed insurers in the state do not want an increasing number of homeowners resorting to Alabama’s non-subsidized wind pool, but they also would not want to compete with a subsidized property insurance pool as exists in other states.

Are Subsidies Sustainable?

Some states have made public policy choices to subsidize policies offered by state-run insurers, pricing them below what the private market can offer. Subsidies hide true actuarial pricing and risk-based pricing, distorting the market. Regardless of the subsidy, the ultimate cost to rebuild still must be paid by someone, either now or in the future.

These subsidized insurance pools have become the “insurer of first resort” for coastal homeowners and, in some cases, their only resort. Most private insurers, unable or unwilling to compete against the state program, have all but stopped writing property coverage in these coastal markets. **If the overriding policy goal is to foster a competitive private market and give consumers more choice, subsidizing policies with taxpayer dollars should not be considered a viable, long-term option.**

In Florida, it is an open question whether subsidizing residential insurance was in fact intended or was simply necessary. In any case, the state’s government-created Citizens Property Insurance Corporation and related Florida Hurricane Catastrophe Fund have been operating without adequate capital to cover losses from a major hurricane. In the event of catastrophic storms, the state would have to assess taxpayers to make up the difference. After a rate freeze at 2005 levels ended in 2009, Citizens was told it could not raise overall average rates more than 10 percent annually to avert a large hike to actuarially sound levels.

In Mississippi, the decision to subsidize its wind pool after Katrina was facilitated by an infusion of FEMA relief money. The Mississippi legislature has decided to discontinue the subsidy, and now consumers are bracing for a potential increase to risk-based market rates.

On the federal level, the National Flood Insurance Program (NFIP), created in the late 1960s as a government-provided insurance alternative to recurring natural-disaster assistance, illustrates how a program formed out of necessity has led to multiple adverse consequences. It has encouraged people to build and live in areas susceptible to catastrophic perils, and it pays time-and-again to fix properties with repetitive losses to the tune of \$200 million annually. Originally intended to be self-supporting, the NFIP is currently \$20 billion in debt and regularly requires an infusion of federal tax dollars to stay afloat.

Insurance Industry Developments

After a series of large catastrophe losses for insurers and reinsurers, prices for insurance on a global basis rose in 2007 as the industry worked to replenish its capital and more accurately reflect risk in its prices. In order for shareholders, rating agencies and regulators to continue to allow insurers to do business in disaster-exposed regions such as coastal Alabama, the industry passed some of these costs to the consumer.

Recently, consumer prices on a global basis have declined again, as insurers and reinsurers have successfully replenished their capital during a period of few natural catastrophes. Yet this current period of price softening could change quickly if large property losses are sustained from a catastrophic event or series of events, as we saw in the middle of the last decade.

As long as the insurance industry lacks confidence in the mitigation efforts in coastal regions, these regions and their consumers will not reap the benefits from increased insurance capital and competition.

How can we do better?

Our collective efforts must focus on strategies for risk management and improving competition. This will create a sustainable insurance market and improve insurance prices. We can achieve this by building and rebuilding stronger homes, encouraging people to protect properties to better withstand hurricanes, improving our understanding of the insurance industry, and fostering a robust private market. Individuals, industry and government at every level have an important role to play.

Principles of Sustainability

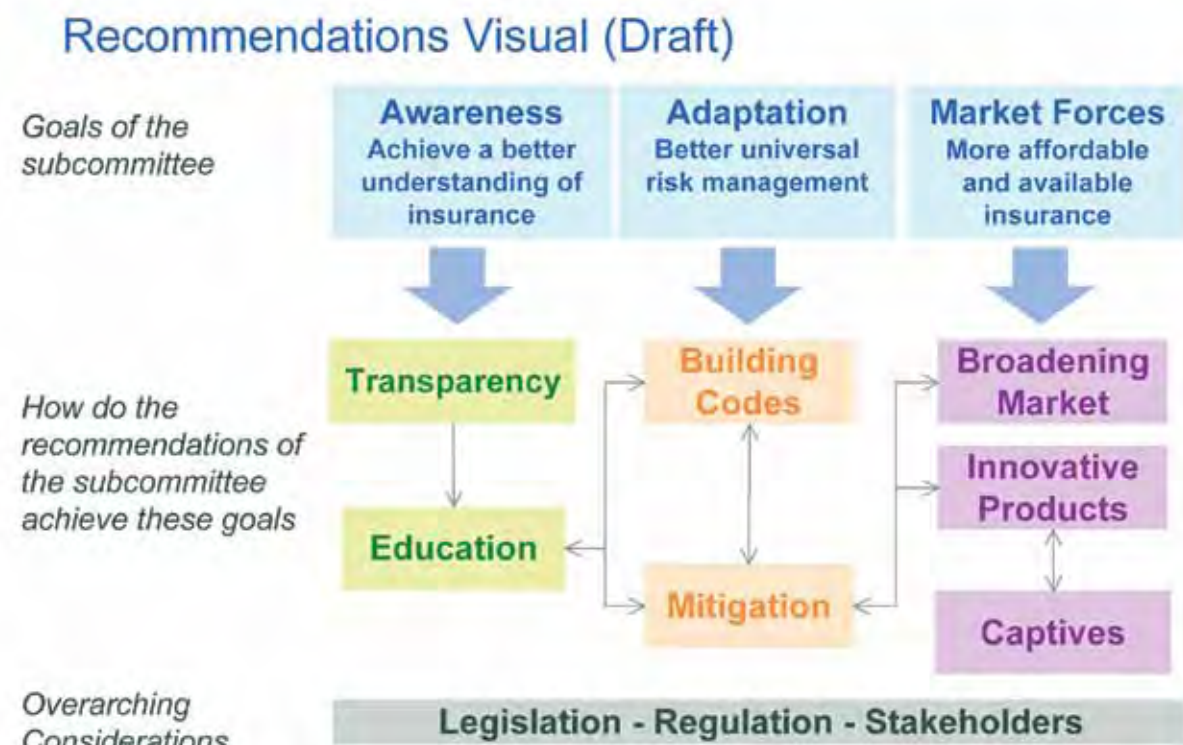
The Coastal Recovery Commission’s insurance subcommittee has focused its attention on the effects of previous and future natural disasters, and on developing strategies to make the coastal insurance market sustainable. The recommendations that follow fall under three principles of sustainability: awareness, adaptation and market forces.

Awareness occurs when we have a better understanding of our insurance system in Alabama and of ways to

make it more sustainable; we can increase transparency in the insurance market and embark on public and professional awareness campaigns.

Adaptation is better universal risk management through our ability to prepare and protect ourselves against disaster; we can encourage property owners to mitigate their homes and local jurisdictions to strengthen and enforce building codes.

Market forces contribute to affordability and sustainability when we foster a competitive private insurance market and enable innovative approaches and products to provide a range of options. The idea is that more competition and more choices will help stabilize insurance rates before and after a disaster, so that the cost of insurance accurately reflects the risk associated with potential property losses in specific places and circumstances.





Highlighted Recommendations

A number of recommendations emphasize the importance of adapting to coastal risk by fortifying homes and buildings against the effects of storms. The benefits of mitigation measures are many: Consumers obtain premium discounts or credits for fortifying new homes or retrofitting existing homes to certain standards, thereby lowering the cost of insurance. Communities and citizens benefit from limiting the short- and long-term economic and psychological damage from a catastrophe, speeding recovery and growth. Private insurers, meanwhile, will want to insure mitigated homes, invigorating the market.

The insurance subcommittee recommends commissioning a mitigation study to collect data on thousands of homes in the coastal region. The data could be shared with insurers and catastrophe modeling firms to show the actual physical condition of the housing stock in

coastal communities. Because insurers price policies based in part on modeled risk characteristics, the more detailed the data, the more granular the insurers' view of local catastrophe risk. To the degree that this detail supports the view that coastal homeowners are building to good codes, a perception of better quality would be reflected in the catastrophe models used by most insurers. This would lead to lower rates.

The mitigation study would help develop new strategies for a comprehensive mitigation-assistance program. Such a program could involve the Coastal Mitigation Trust Fund, another recommendation by the subcommittee. The revolving trust would help homeowners finance mitigation measures through means-tested grants and low-interest loans guaranteed by the trust.

Similarly, stronger building codes and diligent enforcement programs adopted by communities will not only limit economic loss, they can lower insurance costs, as

well. Through the Building Code Effective Grading System (BCEGS) rating program, some insurers recognize communities that achieve certain ratings with premium discounts for residents. To ensure involvement by communities and insurers, we should require insurance carriers recognize the ratings and provide related discounts. Adopting a stronger, uniform building code for the coastal region that goes beyond the 2006 International Residential Code would save residents money and, more importantly, save lives.

Other recommendations call for further examination of ways to limit disincentives for insurers to enter the coastal market and create new incentives for participation. One idea worth studying is to allow licensed insurers to recoup mandated assessments that would apply if the Alabama wind pool suffers losses extending beyond what it has retained and purchased in reinsurance. The assessment increases insurers' potential exposure to losses and thus has been a disincentive for insurers to enter or remain in the state. Other ideas in need of more examination include ways that the premium tax structure in the state could be used to increase competition, and the possibility of utilizing a captive insurance company to provide consumers with short-term relief from the cost of insurance.

Of course, the most important stakeholders in the process are consumers. Only they can choose to protect their properties, and their unified voice can persuade lawmakers to adopt better building standards and support mitigation as a solution. But there is a role for everyone in creating a sustainable insurance system. Insurers, governments, nonprofits and professionals involved in the construction, sale, appraisal, and financing of homes can help raise awareness about the insurance system and what we can achieve.

Insurers are already funding an innovative and recently publicized effort to demonstrate how a fortified home can withstand hurricane force winds. State lawmakers

in 2009 enacted mandatory discounts for homeowners who fortify new homes and retrofit existing ones. And nonprofits such as Habitat for Humanity and Smart Home Alabama have led by example, constructing Fortified For Safer Living Homes with the help of donations from insurance companies.

Recommendations to advance the study, development and communication of various efforts could be achieved by creating a new Alabama Insurance Institute through an executive order from the governor. A public-education campaign coordinated by the insurance institute could collect and disseminate data to inform consumers and various professional stakeholders about the insurance system in Alabama and strategies to lower risk. The institute could drive research about mitigation and building standards. It could study the effectiveness and viability of innovative market-oriented ideas that have the potential to improve the situation, such as public-private partnerships and specialized captive insurance products.



Any education program will need quality information to share. We should increase transparency by providing easier public access to both insurers' rate filings and their aggregate historical data, in order to educate consumers, increase competition, and understand the risk of exposure at the local level. In addition, we can require that insurers offering multi-peril policies show the separate premiums charged for wind and non-

wind portions of policies on their declaration pages, a requirement that would help consumers understand the composition of their policy premium. The Department of Insurance could then ensure that consumers who qualify are receiving the appropriate amount of wind mitigation discount on their policies.

Other practical recommendations also protect consumers. One would require the licensing of contractors and subcontractors to help ensure that mitigation measures are properly installed and construction standards are met. Another would enact an insurance fraud bill to protect consumers from unscrupulous agents and insurers, and insurers from consumers who defraud the insurance system. Estimates by the insurance industry show that insurance fraud raises rates between 15 and 20 percent nationwide. A proposal is already on the table in the state legislature.

State Legislative Efforts

Much of what we can accomplish can be done at the

state level. A review of state legislative efforts this year to address insurance issues shows that lawmakers do not lack ideas or innovative ways to accomplish policy goals, whether to encourage mitigation, improve transparency or place controls on insurers.

Alabama took an important step in 2009 when it passed a law requiring insurers to provide discounts to homeowners who build, rebuild or retrofit homes against hurricanes. The wind pool took that first step in 2007, recognizing mitigation discounts established by the Institute for Business and Home Safety (IBHS), an insurance industry group, as well as BCEGS discounts for community code and enforcement ratings.

Yet Alabama remains one of two states without a comprehensive statewide building code requirement. Cities can voluntarily adopt codes, and some of the strongest codes in the state are in coastal communities. But enforcement is generally inconsistent across the state. The Alabama Building Commission does have building code requirements for state-owned buildings



and some commercial structures, such as hotels and movie theaters.

Since Ivan and Katrina, the state has also adopted legislation allowing residential- and commercial-property captive companies to form in the state, but thus far a captive for such purposes has not been created. Captives organize like-minded individuals or entities, such as doctors or nursing homes, to form their own insurance company to insure their risks. Recently, a regional commercial captive for coastal communities was advanced with support from the South Alabama Regional Planning Commission, but the most recent economic recession limited the ability of local communities to provide public money for the cost of initial capitalization.

Many of the legislative initiatives that follow had a companion bill in the other chamber of the Alabama State Legislature:

Two pieces of legislation to encourage mitigation did not pass during this year's legislative session. One would require insurers to provide notice to consumers of potential discounts and other benefits for mitigation (SB 208). Another utilizes the tax code to subsidize consumers' cost to strengthen homes, allowing a consumer to claim a state income tax credit for the lesser of \$1,000 or 25 percent of the costs incurred to retrofit their home, plus a tax credit up to \$1,500 for the sales tax paid on materials used to retrofit the home. It would also subsidize consumers' premiums with a tax credit up to \$1,250 for "excess premium paid" for insurance (SB 207 and HB 454).

Several bills to improve awareness in the marketplace also did not pass; the subcommittee believes that more support could come if lawmakers can find ways to balance the needs and concerns of various stakeholders. One piece of transparency legislation would break out the total cost of policies by types of peril, such as wind and fire, on the declaration page that shows basic

information about an insurance policy (SB 199); another would make insurers' rate filings with the state and related actuarial data public information available on the Department of Insurance (DOI) website (SB 200); another would require insurers supply aggregate data on total policies, claims and premiums by zip code (SB 713); and another would allow the department to provide consumer assistance in comparing coverages offered in various insurance products (HB 219).

A bill aimed at reducing the number of policies in the wind pool would have offered insurers a one-time credit against premium tax liability for providing coverage on a property currently insured by the AIUA (SB 198). A related bill would provide a new formula for credits against wind-pool assessments on insurers for losses after a storm (SB 197).

Other legislation considered but not passed would have realized some of the subcommittee's consumer-related recommendations, such as a bill that would establish an insurance fraud law (SB 3), and a bill that would establish tax-preferred catastrophe savings accounts for individuals to cover an insurance deductible and other uninsured losses (SB 6).

The Alabama legislature also considered measures to place limits and requirements on insurers. A bill would have limited deductibles to named storms and require insurers offer consumers an opportunity to lower their deductibles by paying a higher premium (SB 5). And a trio of measures would have required insurers write all-risk policies and limits. One of those would have also required a uniform insurance rate sold statewide (HB 248). The other two would also require a price ceiling on the highest rates that could be offered in the state (HB 249, HB 250).

Moving Forward With Recommendations

Discussion: Mitigation and Building Standards Recommendations

Stronger building codes lower insurance costs for homeowners, encourage private insurers to write more

policies, and limit the economic damage from storms. Mitigated homes not only help limit damage, they help lower insurance costs for homeowners through discounts mandated by the state and offered independently by insurers.

According to the Federal Emergency Management Agency, past natural catastrophes show that “proper

	ZONE 1	ZONE 2	ZONE 2B	ZONE 3	ZONE 4
CITY	GULF SHORES	FAIRHOPE	BAYOU LA BATRE	MOBILE	FOLEY
DWELLING COVERAGE	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
NO DISCOUNT	\$ 2,668	\$ 1,872	\$ 1,929	\$ 1,544	\$ 1,201
RETROFIT BRONZE	\$ 2,418	\$ 1,703	\$ 1,760	\$ 1,408	\$ 1,097
RETROFIT SILVER	\$ 2,293	\$ 1,618	\$ 1,675	\$ 1,340	\$ 1,046
RETROFIT GOLD	\$ 2,167	\$ 1,533	\$ 1,590	\$ 1,271	\$ 994
IBHS NEW	\$ 2,042	\$ 1,449	\$ 1,506	\$ 1,203	\$ 942

	ZONE 1	ZONE 2	ZONE 2B	ZONE 3	ZONE 4
CITY	GULF SHORES	FAIRHOPE	BAYOU LA BATRE	MOBILE	FOLEY
DWELLING COVERAGE	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
NO DISCOUNT	\$ 5,902	\$ 4,132	\$ 4,251	\$ 3,405	\$ 2,645
RETROFIT BRONZE	\$ 5,346	\$ 3,756	\$ 3,875	\$ 3,102	\$ 2,415
RETROFIT SILVER	\$ 5,068	\$ 3,568	\$ 3,687	\$ 2,950	\$ 2,300
RETROFIT GOLD	\$ 4,790	\$ 3,380	\$ 3,499	\$ 2,799	\$ 2,185
IBHS NEW	\$ 4,512	\$ 3,192	\$ 3,311	\$ 2,647	\$ 2,070

	ZONE 1	ZONE 2	ZONE 2B	ZONE 3	ZONE 4
CITY	GULF SHORES	FAIRHOPE	BAYOU LA BATRE	MOBILE	FOLEY
DWELLING COVERAGE	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
NO DISCOUNT	\$ 11,292	\$ 7,899	\$ 8,119	\$ 6,506	\$ 5,052
RETROFIT BRONZE	\$ 10,227	\$ 7,179	\$ 7,399	\$ 5,926	\$ 4,611
RETROFIT SILVER	\$ 9,694	\$ 6,819	\$ 7,039	\$ 5,635	\$ 4,391
RETROFIT GOLD	\$ 9,162	\$ 6,459	\$ 6,679	\$ 5,345	\$ 4,170
IBHS NEW	\$ 8,629	\$ 6,099	\$ 6,319	\$ 5,054	\$ 3,950

The chart shows examples of potential premium discounts offered by the Alabama Insurance Underwriting Association (AIUA) to homeowners who build, rebuild or retrofit their homes to better withstand hurricanes and other catastrophic windstorm events.

The amount of discount, or credit, is based on three levels of standards (Bronze, Silver, and Gold) developed by the Institute for Business and Home Safety (IBHS), an insurance industry supported scientific research organization. For example, an existing home in Foley valued at \$100,000 would receive a \$155 premium discount (12.9 percent) for retrofitting to the Silver standard; the same

home in Bayou La Batre retrofitted to the same standard would receive a \$254 premium discount (13.2 percent). The AIUA also offers discounts for new construction homes certified to have met the requirements of the 2006 International Residential Code, including the design requirements for construction in hurricane-prone regions.

It should be noted that the AIUA, which was formed to offer a “last resort” insurance option for homeowners who are not able to purchase coverage from private insurers, generally charges higher rates than the average rate available in the private market.

SOURCE: ALABAMA INSURANCE UNDERWRITING ASSOCIATION

MITIGATION MEASURE	BENEFITS	COSTS
Asphalt roof shingles with high bond strength	Reduces shingle blow-off in high winds	Slightly more expensive
Additional roof sheathing fasteners and underlayments	Reduces roof-covering damage during a severe event	Minimal cost increase when installed during a reroofing project
Elevate lowest floor 1 or 2 feet above required elevation	Reduces potential for structural damage by waves or floodwaters	May conflict with community building height restrictions, require additional seismic design, and longer pilings may cost more
Elevate structure in a coastal A flood zone on an open foundation, or use only breakaway walls for enclosures below lowest floor	Reduces potential structural damage by waves, erosion and floodwaters	Reduces ability to use understorey of structure for storage

Source: Federal Emergency Management Administration

zoning, foundation, design, engineering, construction and maintenance practices are important factors in the ability of a building to survive a hazard event with little or no damage.”

Risk-management models weigh the benefits of taking measures against their costs. The idea is to reach an optimal balance that protects residents and their property while acknowledging that the cost of additional safety measures may not be worth the benefit. That said, evidence shows that the minimal initial costs for additional mitigation measures have many long-term benefits. These include saving lives, reducing premiums and limiting losses.

The potential for consumer savings could be significant, especially if discounts for mitigation (IBHS discounts) are combined with separate discounts for residents in communities that earn high ratings for strong building codes and enforcement (BCEGS discounts).

The recommendations aimed at proliferating the mitigation of homes in coastal Alabama amount to a basic strategy; they consider funding mechanisms, data collection and the need to elevate consumer awareness about the benefits and costs of safety measures for homes.

The recommendations aimed at better building stan-

dards recognize the need for enforcement resources, sustainable local land-use policies and cooperation across the region and among various industries to develop and implement stronger standards.

Mitigation Recommendations

1. Establish a trust fund to provide incentives and financing for homeowners to take mitigation measures. The coastal mitigation trust concept could be funded with public money to offer homeowners in Alabama’s two coastal counties a grant or a loan to complete mitigation on their homes. Grants covering the cost of inspections and mitigation measures would be based on a means test, and low-interest loans provided by banks would be guaranteed by the revolving trust fund. To limit fraud, default and poor workmanship, the state should develop a mitigation model that incorporates best practices by states with similar programs. To create more incentive, the interest on a loan could be state-tax deductible. The insurance department would ensure that consumers receive insurance rate discounts.
2. Commission a study of what hurricane models suggest that mandated mitigation discounts should be for homeowners in Alabama. In addition to helping consumers get the correct amount of discount, the study would collect detailed information about the condi-

Coastal Mitigation Trust



Step 1: Homeowner receives grant from CMT (via Bank) to complete inspection*

Step 2: Post inspection, Homeowner requests from Bank low-interest loan or grant for home improvement

Step 3: Bank receives funds for loan from CMT, provides them to Homeowner

Step 4: Homeowner takes mitigation certification to Insurance Company

Step 5: Homeowner receives a mitigation credit that lowers his premium (based on Dol rates)

Step 6: Over length of loan, Homeowner pays back low-interest loan to Bank (no payback with grant)

Step 7: Bank returns capital back to CMT (including inflation, but without interest)

Step 8: Homeowner may receive state tax credit for interest on loan

* Grant may be made directly to contractor to ensure loan is used for mitigation

tion of the housing stock in coastal counties. The data could help reduce homeowners' insurance costs when supplied to insurers and their reinsurers.

3. Require consumers, Realtors and builders to identify to potential home buyers all the wind-mitigation features on a home, in order to make mitigation measures a factor for home buyers to consider and spur sellers to install those measures.

4. Evaluate whether to require admitted carriers to obtain proof of wind and flood coverage from consumers located in flood zones A and V in order to offer non-wind coverage to those consumers.

5. Develop a nonprofit entity to utilize the Hazard Mitigation Grant Program (HMGP) of the Federal Emergency Management Administration.

6. Strengthen local inspection programs for mitigation

measures by developing sources of funding to increase the operating budgets of local building-code departments.

7. Encourage accurate mitigation inspections by requiring they be conducted by trained and licensed professionals, including certified local building officials.

8. Eliminate sales tax on materials used to retrofit homes against the effects of storms.

9. Educate consumers and other stakeholders about the potential insurance cost savings and return-on-investment that can come from fortifying and retrofitting their homes against storms. The education campaign could be led by a new Alabama Insurance Institute.

Building Standards Recommendations

1. Develop a strong statewide building code – or at minimum a strong, uniform code for local jurisdictions in

Alabama’s coastal counties to adopt. The codes should be based on the 2006 International Residential Code, with no reductions and with enhancements for wind, flood and other perils that make sense for the coastal region. In addition, the codes should require retrofits during the reconstruction of existing homes to meet the new standard.

2. Develop and implement a uniform process for localities to review construction plans and to inspect homes and buildings; adopt a series of recommendations from code officials to achieve uniformity.

3. Work with various stakeholders in the construction, sale, appraisal, and financing of homes and buildings to develop and implement the prior two recommendations. Stakeholders should include consumers, home builders, engineers, Realtors, appraisers, bankers and local governments and their building code departments.

4. Strengthen inspections and enforcement at the local level by developing sources of funding to increase the operating budgets of local building code departments.

5. Strengthen and develop programs to train and license local building-code officials to increase effectiveness of code enforcement throughout the coastal region.

6. Require insurance carriers to recognize industry-established Building Code Effectiveness Grading Standards (BCEGS) ratings and provide related discounts for communities that achieve certain rating levels.

7. Develop and implement higher standards for free-board levels for flooding, set backs from water and flood proof requirements.

8. Adopt and implement more restrictive local land-use policies that recognize risks associated with structures in flood-prone areas, with particular emphasis on properties that have suffered repetitive losses;

local policies could incorporate rebuilding to the FEMA Coastal Construction Guidelines, which are enhanced design and construction standards for strengthening homes against wind and storm surge.

9. Encourage code uniformity by establishing that changes to local building standards will be adopted uniformly by all of the jurisdictions in Baldwin and Mobile counties.

10. Publicize information about stronger building standards with consumers and other stakeholders.

11. Develop entities and resources needed to gather data on the quality of construction of homes and buildings in the coastal region.



12. Develop ongoing involvement and dialogue among stakeholders through a new Alabama Insurance Institute, a body that could be established by the governor’s executive decree to lead public education and information campaigns around insurance issues.

Discussion: Transparency and Education

Without adequate information, the public and public officials cannot properly assess the insurance system to

determine what actions are needed for improvement. Regulatory and statutory efforts to increase transparency in the system would provide the data necessary to educate consumers, ensure fairness and even boost competition.

For instance, a recommendation to make insurers' rate filings public information would educate consumers about how carriers arrive at rates for non-wind portions of homeowner policies. With guidance provided by the Department of Insurance, consumers could see what each licensed carrier has indicated as their history of premiums and losses by geographic territory and how they determined their rates. The rates charged in different parts of the state could be compared, which would shed light on a common concern among consumers involved in the subcommittee's discussions—that rates for fire coverage in the coastal counties are unwarranted relative to rates in other geographic areas. For consumers looking to compare the price of property insurance across the state, the DOI website makes available examples of premiums being charged by a handful of insurers in many major cities. In addition, the data could help identify jurisdictions with a high rate of fire-or-water damage claims, which may indicate a need to boost enforcement and inspections.

Consumers would not learn as much from the rate filings about how wind-policy prices are determined. That's because while fire rates are still determined in large part by historical claims, rates for wind coverage are now driven by computer catastrophe models. Selected aggregate data from insurers, such as Total Insured Value by zip code, could help interested parties identify concentrations of property exposure in areas of the state. And making public certain types of aggregate data could also encourage new insurance companies to enter the state because the data would help them determine where their best potential profitability would be.

Transparency and Education Recommendations

1. Increase transparency by making both insurers' rate filings and their aggregate historical data public information, in order to educate consumers, increase competition, and know local risk of exposure.
2. Through regulation or statute, require that insurers offering multi-peril policies show the separate premiums charged for wind and non-wind portions of policies on their declaration pages. Such a requirement would help the Department of Insurance identify the effect that a mitigation discount has on the wind portion of a policy and would help consumers understand the composition of their policies.
3. Require insurance companies provide consumers with a uniform disclosure form or check list, showing what is included and not included in a residential policy.
4. Establish a new Alabama Insurance Institute by governor's executive decree to develop research, encourage dialogue and coordinate public-education campaigns around aspects of a sustainable insurance system. The entity would provide ongoing study of insurance models and products in other states and countries. It would include the participation of various stakeholders – consumers, agents, insurance companies, government officials, and various professionals involved in the construction, sale, appraisal and financing of homes.

Discussion: Market Forces and Alternative Products

Increased competition not only gives homeowners more choices, it helps stabilize insurance rates. As previously described, more competition can be achieved by changing government policy and regulation over the insurance industry, as well as public and private investment in mitigation strategies, data collection and

education. Studying the advantages and disadvantages of potential policy and regulatory adjustments may provide the intellectual balance needed to form proposals that could make insurance more affordable and available.

Alternative products offer consumers fresh choices and make the market more competitive. One frequently mentioned idea would establish a form of insurance captive company, a private-market option that would bring like-minded entities together to form their own company to insure their risks. Recently enacted legislation has made it possible to form a residential-or commercial-property captive in Alabama.

Possible proposals for establishing a captive insurance company should be carefully studied. The subcommittee did not recommend a captive because the major challenge facing a regional property-insurance captive would be its limited ability to sufficiently spread risk and keep reinsurance costs and policy prices low. There is also concern among a plurality in the subcommittee that a residential captive would not have sufficient initial capital – likely supplied by public funds – to pay for losses that could result from a severe hurricane. As a result, the captive would need to operate 5 to 10 years without a severe storm in order to sufficiently build its capital reserves.

But captives can be adapted, such as an idea to further spread risk by forming partnerships with other residential captives located in states not along the Gulf Coast. Captives can also serve different purposes. For instance, a so-called “reciprocal captive” could be developed for a special purpose: to encourage homeowners to take their policies out of the wind pool. Under this specialized captive, homeowners with wind pool policies could enter the captive only if they have mitigated their homes. Homeowners would be encouraged to mitigate their homes if the captive could offer a discounted rate guarantee.

INSURANCE INSTITUTE WOULD ADVANCE STRATEGIES FOR SUSTAINABILITY

To create a sustainable property-insurance market, we will need to continue discussing and developing the ideas and strategies identified by the Coastal Recovery Commission’s insurance subcommittee.

As envisioned by the subcommittee, an Insurance Institute created through an executive order by the governor would gather together an array of stakeholders to research, cultivate and communicate these ideas, as well as serve as an incubator for new ones.

The subcommittee imagines, for instance, that the Institute would play a vital role in advancing the mitigation of homes against the effects of storms. Among other actions, the Institute could drive the mitigation study surveying the condition of the housing stock in coastal counties and educate consumers about the potential cost savings that come from fortifying and retrofitting homes. Moreover, by bringing together professionals from engineering, construction, real estate and banking, the Institute could engage those industries in mitigation efforts while enhancing communication between stakeholders.

The Institute could also act as a clearinghouse for the collection, maintenance and dissemination of information that could help consumers, regulators and lawmakers. It could spearhead innovative market-based ideas, such as public-private partnerships and alternative insurance products, and could also provide Alabama a global perspective on best insurance practices through the study of insurance models and solutions operating in other states and countries.

While the structure and composition of the Insurance Institute would need to be determined, the subcommittee believes it is important that everyone with a stake in a sustainable insurance system be involved—including consumers, agents, insurance companies, government officials, and professionals involved in the construction, sale, appraisal and financing of homes.

Market Forces and Alternative Products Recommendations

1. Conduct a study on the concept of “recoupment,” which in general would allow admitted insurance companies participating in the wind pool to recoup mandated assessments should the pool suffer losses that extend beyond what it has retained and purchased to cover losses. A recoupment mechanism would help alleviate the impact of this assessment on insurers. For example, a recoupment mechanism such as a fee on policies for a period of time could pass on the assessment statewide or only on policies in affected areas. Although insurers are able to pass the cost of assessments to consumers by increasing the price of policies, insurers are reluctant to increase rates for such purposes due to competition.

2. Conduct a study of premium-tax revenues. A completed study would enable recommendations for how the state’s premium-tax structure could be used to increase competition in the property-insurance market,

improve property-insurance availability and reduce insurance costs for homeowners in south Alabama.

3. Conduct a study on the possibility of utilizing a captive insurance company to provide homeowners with short-term relief from the cost of insurance.

4. Encourage insurers to offer multi-year homeowners insurance policies, which would protect consumers against annual spikes in the cost of their insurance.

5. Invite insurance companies to Alabama for an annual symposium to attract new carriers to the coastal market.

Other Legislative and Regulatory Recommendations

1. Require licensing of contractors and subcontractors to help ensure that mitigation measures are properly installed and state or local construction standards are met.



2. Enact an insurance fraud bill to protect consumers from unscrupulous agents and insurers, and insurers from consumers who defraud the insurance system. Estimates by the insurance industry show that insurance fraud raises rates between 15 and 20 percent nationwide. Enforcement would be conducted by agents with the Department of Insurance. The law would include an appropriate threshold for initiating investigations.
3. Enact a reasonable statute of limitation for reporting property claims; the current limitation is six years under state contract law.
4. Enact and promote at the state level tax-free funds for individuals to help homeowners pay for insurance deductibles and mitigation measures.
5. Encourage Alabama lawmakers in Washington, D.C., to reform the National Flood Insurance Program, addressing issues such as cap limits, lack of coverage for loss of business income and lack of coverage for loss of use.
6. Encourage Alabama lawmakers in Washington, D.C., and Montgomery to find a resolution to wind and flood claim settlements, such as a mandate for property owners in flood zones to have wind and flood insurance, and to increase transparency on all property coverage.
7. Encourage Alabama lawmakers in Washington, D.C., to support and pursue a tax-deferred catastrophe reserve for insurance companies to lower their cost of capital.

Strategies for Moving Forward

The subcommittee recognizes that some recommendations face significant political and organizational challenges. There are many reasons why we have not yet adopted stronger building codes or adopted ways to improve transparency in the system. Stronger building standards will require the support of industries

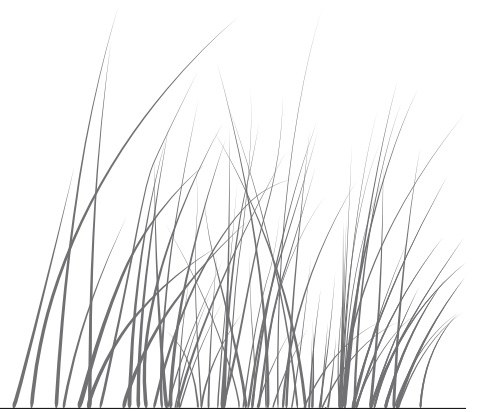
that traditionally have been at odds with insurers and consumers who often advocate them. Similarly, insurers will need to work with regulators and consumer-advocates to advance transparency measures. And consumers must be involved to improve their understanding of insurance issues and advocate for a balanced insurance system. What's needed is ongoing communication among all stakeholders to air concerns, debate ideas and educate one another. It's why the recommendation to establish Alabama Insurance Institute is so important.

Finally, the subcommittee emphasizes that these recommendations toward a more sustainable insurance system should be pursued even if oil-spill money never arrives. It should be no surprise that the process of sorting through recommendations was invigorated by the possibility that the region and state might have funding for new initiatives. Some important recommendations, though, would have a minimal effect on government budgets and could be enacted while the penalty assessment and allocation process continues.

A complete list of proposals put forward by CRC committees and subcommittees can be found in the Appendix.

9 Infrastructure: How Do We Choose?

BY DON IRBY





The BP oil spill of the spring and summer of 2010 rocked the very foundations of the Alabama Gulf Coast – environmentally, economically and socially – to a degree that the region’s future depends on its response.

For 60 days, under the aegis of the Coastal Recovery Commission of Alabama, citizen-leaders from throughout Mobile and Baldwin counties listened to the stories of the oil spill’s impacts, identified vulnerabilities in the region’s capacities for quick recovery, and examined ways in which coastal Alabama families, institutions, and companies might better organize themselves.

The result of this unprecedented coming together of all manner of viewpoints was, to no great surprise, all manner of recommendations, proposals and projects. (To get a sense of the range of proposals put on the table during CRC committee and subcommittee discussions, see the list in the Appendix.) Many of the ideas and suggestions clearly have merit. The problem: How do we choose? What should we do immediately? What can wait? What isn’t worth doing at all?

Not surprisingly, many of these questions apply directly to the hard choices that guide investments in infrastructure – roads, water and sewer systems, stormwater management, and other components that form and connect the bone structure of human society. The CRC’s Healthy Economy infrastructure subcommittee quickly realized that the challenge was not in identifying projects, but rather in choosing among dozens of seemingly worthy proposals requiring billions of dollars to implement. Therefore, the subcommittee believed its greatest contribution to the CRC effort would be to explore a methodology for evaluating and prioritizing projects.

WHY WE NEED A CLEAR AND CONSISTENT PATH TO DECISION-MAKING

In the course of Coastal Recovery Commission deliberations, we came to understand that:

Hopes and expectations were raised but are fragile.

Skepticism persists that this community-based process will be continued and that its recommendations will be implemented.

Much of the frustration in the aftermath of the oil spill and with the oil-spill claims process centers around issues of trust, transparency and confidence that decisions are based upon consistent application of clearly established criteria.

Individuals, businesses and institutions would prefer and support a selection process that is transparent, that demonstrates clear objectives and screening criteria, and that minimizes political tugs of war.

Such a “choosing tool” requires an organizational context. From the infrastructure subcommittee’s perspective, essential components of this decision-making context include:

- Determination of a hierarchy of community needs and priorities affirmed by community consensus
- A process for identifying and capturing potential projects and proposals
- A set of project evaluation criteria based upon community needs and priorities
- A screening methodology based on the evaluation criteria
- And an entity responsible for overseeing the process and facilitating project funding and implementation efforts.

The CRC process launched the discussion to identify and rank community needs, the first point on the above list. A key CRC recommendation addresses the final point by proposing a permanent regional leadership council that will use the CRC report as a foundational document for next steps. Already prioritized as a next step is the launch of an ambitious regional strategic planning process that will be directed by the leadership council. The infrastructure committee focused on the middle three components of a decision-making apparatus.

How do we choose?

No budget is big enough to grant every wish. And every decision will likely pass a gauntlet of tests, many of which are beyond the direct control of regional leaders. Nevertheless, establishing a transparent and objective sorting process that leads to implementable goals with strong public support is a worthy ambition. If we were to prioritize principles established by the CRC in these pages, any project seeking funding should have to demonstrate ways in which it advances:

- **Coastal recovery or resiliency.** Does the project aid in recovery efforts of entities or natural resources negatively impacted by the oil spill? Will funding provide long-term resiliency that will reduce probability for failures, consequences from failures or time needed for recovery?
- **Transformative change.** Does the project create a significant improvement in quality of life, commerce, and the environment and contribute to a diverse and sustainable regional economy.
- **Regionalism.** Does the project promote regional solutions to challenges through collaboration, alliances and broad-based regional entities to best capture economies of scale and a shared vision? Regionalism is not simply cooperation between a few neighbors doing what is best for them. Regionalism provides collateral benefits to economic development, resiliency and economic diversification.
- **Economic diversification.** Does the project diversify the coastal Alabama economy, broadening commercial activity so that the region itself is better able to absorb negative influences? At the same time, does the project leverage the existing strengths of our people, beaches and bay, port and transportation hubs, industrial base, and education and medical facilities without compromising the character, environment and quality of life of coastal Alabama?

To better focus answers to some of these questions, applicants could be asked to provide project information including a cost/benefit assessment, environmental and health impacts, obstacles for implementation, impact on employment levels and a list of other funding sources.

Project evaluation

Projects would be ranked on a numerical scale based upon their abilities to bring about **coastal recovery or resilience, transformative change, regionalism, economic diversification** as well as their impact on the

PROJECT FUNDING CAUTIONS

In allocating money for projects, we offer this advice:

Beware of operational costs for projects that are not self-sustaining.

Don't over-commit funds. Unforeseen events are by definition unpredictable.

Local, regional and even state regulatory approval and oversight capacity may have to be augmented to prevent bottlenecks, project delay and cost escalations.

Properly scope and analyze proposals so that cost overruns do not threaten a project's economic feasibility or objectives.

Require accountability and provide continuing oversight of processes, budgets and performance.

environment. Scoring results might be tabulated in a matrix or table that could be graphically depicted in spider or radar diagrams for quick comparison of project parameters and benefit. At the end of the chapter, we use sample projects to demonstrate how this scoring might look.

No matter what kind of application is submitted, no matter how transparent and objective the process, decisions will ultimately be made by humans. We suggest a panel of experts and community leaders, possibly teams of people, who would review the submittals for completeness and clarity, make requests for additional information and ultimately judge their worthiness for implementation. These screening and scoring teams must be subject matter competent, free of conflicts of interest, drawing on outside resources as necessary to make fully informed evaluations and decisions. The whole process, including selection of the review committee, might be overseen by the CRC-recommended leadership council.

Project objectives

In order to leverage projects for the best possible outcomes, we believe that funding should be seen as establishing an investment portfolio for the future of coastal Alabama. Just as individuals invest money in preparation for their retirement, coastal Alabama must invest for its future. Project selection, funding, and administration should be a transparent, criteria-based process that leads to a diversified and balanced set of initiatives advancing the region – and the state – toward a set of objectives explored in the CRC process and refined and focused by the proposed strategic planning process.

Among broad objectives already identified:

- Continuing the public-engagement-based process begun by the Coastal Recovery Commission to ensure community support for lasting and sustainable improvements to coastal Alabama resiliency.

- Establishing a regional evacuation and sheltering plan that includes increasing the capacity of evacuation routes and hardening and increasing the capacity of public shelters and public transit, as recommended by the CRC's Healthy Society committee.
- Increasing the resiliency of essential services such as access to safe drinking water, sanitation and public safety, as recommended by the CRC's Healthy Society committee.
- Building resilience, as recommended by the CRC's Healthy Economy committee, through diversification of coastal Alabama's single-industry, single-season-dependent economies: Seafood harvesting, seafood processing and tourism.
- Preserving the unique character, culture and economic sustainability of the seafood harvesting communities of south Baldwin and Mobile counties.
- Restoring the health of the Gulf while balancing the needs of a working coast and maximizing the sustainable economic yield of Gulf fisheries, as recommended by the CRC's Healthy Environment committee.
- Lowering the long-term cost of coastal Alabama property insurance by implementing the necessary regulatory, legislative and risk mitigation actions recommended by the Healthy Economy committee's insurance subcommittee.
- Recognizing and restoring barrier islands, beaches and tidal marshes as the first lines of defense and resilience for coastal Alabama's natural and economic resources as recommended by the CRC's Healthy Environment committee.
- Maintaining a healthy environment and minimizing impact on the regional economy by establishing and adhering to water and air quality standards recommended by the Healthy Environment committee.
- Supporting sustainable, environmentally responsible land use planning and development practices recommended by the CRC's Healthy Economy and Healthy Society committees.

- Supporting goals for a safer, healthier region with adequate access to mental and physical health services and educational opportunities, as recommended by the CRC’s Healthy Society committee.

Guided by such objectives, a portfolio of projects should build regional resiliency in both the near and long terms. Governing structures put in place to oversee that portfolio and distribute money should be designed to anticipate and manage: non-recurring, one-time investments; recurring events and projects such as beach restoration; and revolving funds that utilize low or no-interest loans.

Employing a decision-making matrix injects criteria-guided objectivity in a process. But no “choosing machine” can turn out clear “yes” or “no” answers on whether to fund projects or how much to invest in what time frame. There will always be a human element in making decisions about human affairs. So in investing for our coast, we must be smart, but also flexible. Overarching goals must enjoy support from community leaders and citizens, and relationships between goals and strategies must be clear and continually reaffirmed. Risk should be spread over several projects with a common objective, leveraging money for maximum benefit. Projects should be evaluated not only in terms of potential benefit, but also in terms of the costs of not funding them. Keeping the principles of regionalism in mind, some projects with lower composite scores might still be recommended for funding if proposals satisfy objectives related to balancing the regional investment portfolio.

A model for decision-making

The infrastructure subcommittee developed a template for our project evaluation tool and invited project advocates to submit their proposals by completing the template questionnaire. We’ve posted their submissions on the CRC website (www.crcalabama.org) under Resources and provided a list of applicants in the Appendix, along with a copy of the template form itself.

VISUALIZING A “CHOOSING TOOL”

How might projects scored by our suggested rating system look in a graphic display?

We’ve chosen three recently completed or funded projects that might fall under our three major committee topics of Healthy Environment, Healthy Society and Healthy Economy, to illustrate how this scoring process might be used. Of course, the scores we’ve assigned their components don’t represent an evaluation team’s assessment or recommendations for funding. They’re just sample numbers to demonstrate the system.

The Projects

Mobile Container Terminal. A major expansion Alabama State Port container handling capacity to boost the competitive position of the Port and service Alabama’s growing automotive manufacturing sector.

McDonald Road. A project to provide more efficient access to and from south Mobile County, supporting storm evacuation strategies and economic development opportunities.

Blue Hill Bay. A fully funded and permitted project for shoreline restoration and preservation of road access to an offshore barrier island.

Comparing Scores

Scores based on a scale of 1 to 100 are assigned to five criteria: How the proposal contributes to coastal recovery, resiliency, transformative change, regionalism and economic diversification. And we added three additional scoring categories: Implementation obstacles, environmental impact, and the potential for leveraging funding.

Project Identification Template Scoring Matrix

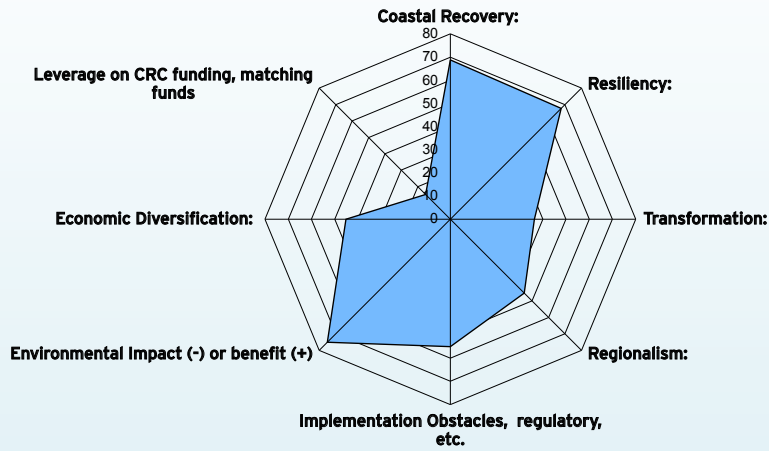
	Blue Hill	McDonald Rd	Container Terminal
Coastal Recovery:	69	60	44
Resiliency:	68	81	71
Transformation:	36	48	83
Regionalism:	45	60	83
Implementation Obstacles, regulatory, etc.	55	55	70
Environmental Impact (-) or benefit (+)	75	31	68
Economic Diversification:	45	54	70
Leverage on CRC funding, matching funds	15	43	70
	408	431	488

Illustrating Scores Graphically

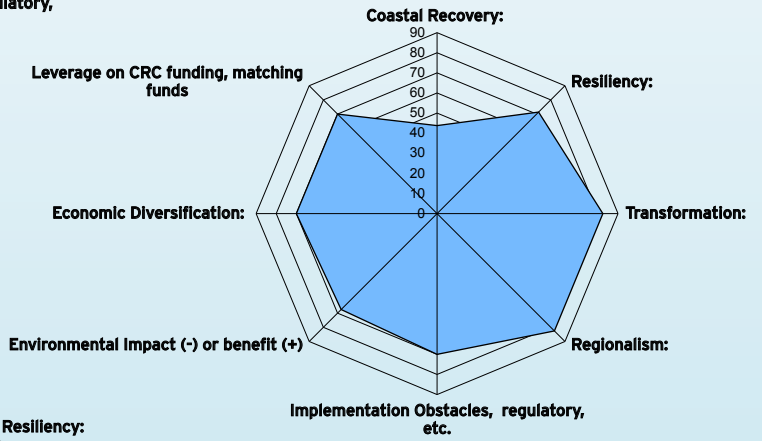
To graphically illustrate the scoring, we plotted the numbers on a “spider diagram,” which gives us the opportunity to visually depict the potential impact of the proposal. The larger the area covered in the spider diagram, the higher the potential value of the project measured against the evaluation criteria.

If we want to compare the relative values of the proposals, we can overlay them on a composite spider diagram.

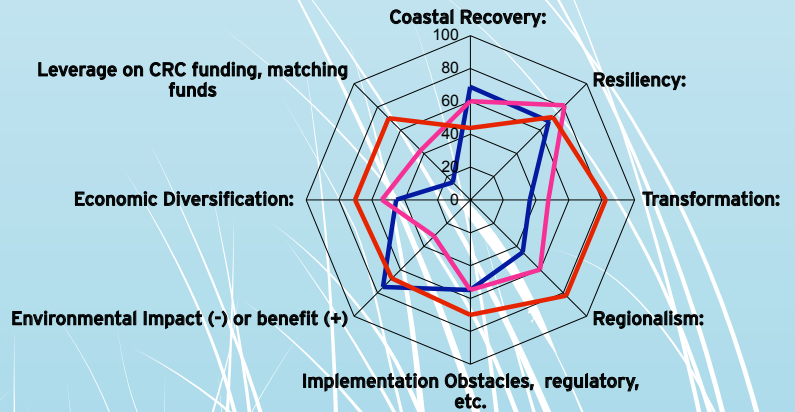
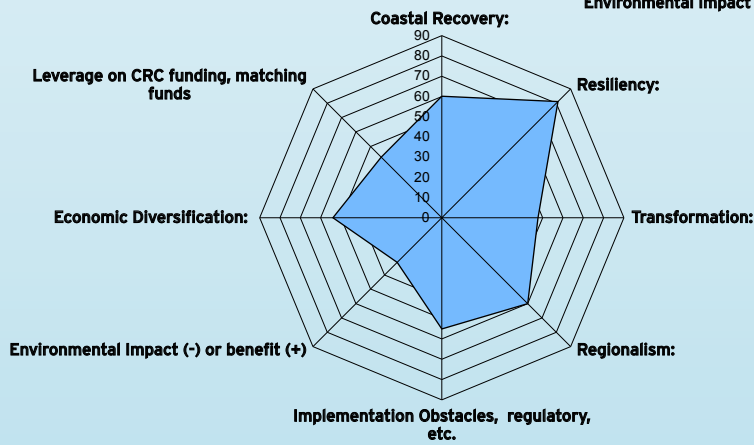
Blue Hill



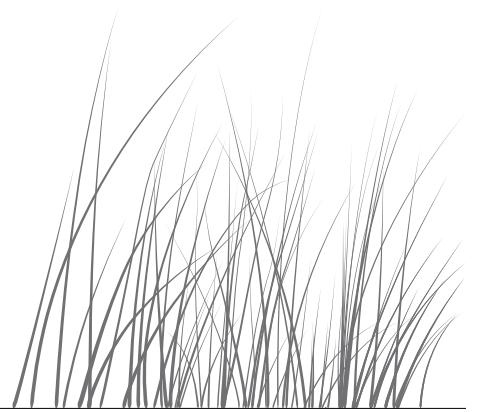
Container Terminal



McDonald Road



10 | Glossary



AARP: Formerly the American Association of Retired Persons, AARP is a nonprofit, nonpartisan membership organization that helps people 50 and over improve the quality of their lives. The organization, founded in 1958, aims to deliver value to its members through information, advocacy and service. *aarp.org*

ACF: Alabama Coastal Foundation

Actuarially Sound Rate: In property insurance, it describes when premiums charged are sufficient to cover the full expected value (the average of all possible outcomes, weighted by their probabilities) of claims for losses and the administrative expense for insured properties.

ADEM: Alabama Department of Environmental Management; pronounced “ae-dem.”

AIDT: Alabama Industrial Development Training

Alabama Coastal Foundation: A nonprofit organization that attempts to create a balance between conservation and economic growth. It focuses on problem-solving and emphasizes non-adversarial cooperation. *joinacf.org*

Alabama Department of Environmental Management: Alabama’s primary state environmental agency. *adem.state.al.us*

Alabama Industrial Development Training: Part of the Alabama Community College System, AIDT provides workforce development training for new and expanding businesses. *aidt.edu*

Alabama Port Authority: The Alabama State Port Authority owns and operates the public terminals at the Port of Mobile. *asdd.com*

Alabama Technology Network: Part of the Alabama Community College System, ATN links manufacturers in the state with a network of universities, colleges, businesses and government to solve the needs of industry through technical assistance and training. *atn.org*

American Planning Association: An independent, not-for-profit educational organization that provides leadership in the development of vital communities by advocating excellence in community planning, promoting education and citizen empowerment, and providing the tools and support necessary to meet the challenges of growth and change. *planning.org*

ATN: Alabama Technology Network

Austal: An Australian company that specializes in the design and construction of aluminum vessels. Its main products include passenger and freight ferries, luxury yachts and military vessels. *austal.com*

Baldwin County Economic Development Alliance: *baldwineda.com*

Baldwin County Sheriff’s Corrections Center: The detention facility operated by the Baldwin County Sheriff’s Office and located in Bay Minette. The Corrections Center houses people awaiting trial on felony charges, along with inmates arrested on misdemeanor charges by the Sheriff’s Office or the Bay Minette Police Department. *sheriffofbaldwin.com*

Bay Area Food Bank: Begun in Mobile in 1981, the Bay Area Food Bank today supports more than 700 feeding programs at more than 550 agencies across 24 counties in Alabama, Mississippi and Florida. The organization operates a 39,000-square-foot facility in Theodore. *bayareafoodbank.org*

Bishop State Community College: A state-supported, two-year, public, historically black college (HBCU) located in Mobile, Alabama.

b SCC.cc.al.us

Bon Secour Fisheries: A family-owned leading seafood processor and wholesale distributor providing a variety of quality seafood products.

bonsecourfisheries.com

Building Code Efficiency Grading Schedule: An industry-driven program that grades building codes in effect in a particular community and how the community enforces its building codes, with special emphasis on mitigation of losses from natural hazards.

Catastrophe Modeling: Used by insurers and reinsurers, it is the process of using computer-assisted calculations to estimate the losses that could be sustained by a portfolio of properties due to a catastrophic event such as a hurricane or earthquake.

CDE: Community Development Entities

Centers for Disease Control and Prevention: The leading federal government public health agency, commonly referred to as the CDC. The agency, based in Atlanta, protects health and promotes quality of life through the prevention and control of disease, injury and disability. *cdc.gov*

Clean Water Act: The main federal law governing water pollution. The term can refer just to the Clean Water Act of 1977 or also include the Federal Water Pollution Control Amendments of 1972 and the Water Quality Act of 1987.

Coastal Recovery Funds: A term created for this report (“How Do We Choose?”) that refers collec-

tively to any funds, regardless of source, that may become available for allocation and distribution to support the implementation of recommendations of the Coastal Recovery Commission.

Corexit: A product line of solvents that was the main dispersant used on oil from the Deepwater Horizon spill.

Crab Picking: Removing the meat from the crab’s shell.

CRF: Coastal Recovery Funds

CWA: Clean Water Act

Dauphin Island Park and Beach Board: Operates the Island Campground, Historic Fort Gaines, fishing pier and an area of public beach for this resort Island. *dauphinisland.org*

Dauphin Island Sea Lab: Alabama’s state marine science institution; on Dauphin Island. It focuses on education and research, coastal zone management policy, and, through its Estuarium aquarium, public education. *disl.org*

Deductible: In an insurance policy, it is the portion of any claim for damage or loss not covered by the insurance provider.

Deepwater Horizon: The offshore rig that drilled the BP well that blew out on April 20, 2010, causing the spill. The blowout caused an explosion and fire that killed 11 men and, on April 22, sank the rig.

Deepwater Horizon Oil Spill Estimates: Federal government scientists estimate that the Deepwater Horizon well spouted 4.9 million barrels (206 million gallons) of oil. The scientists think BP’s

containment efforts captured about 800,000 barrels, leaving 4.1 million barrels, or 172 million gallons, in the Gulf. In general references in this report, we have used the 172-million-gallon figure.

Deepwater Horizon Response Team: A coordinating body created by the four universities of the Mississippi Research Consortium to offer the universities' research and educational capabilities to help with the oil-spill response.

ibl.state.ms.us/mrc

DHRT: Deepwater Horizon Response Team

Dispersant: A chemical that breaks up spilled oil into small globules that remain suspended in water rather than rising to the surface and forming a slick.

Economic Development Partnership of Alabama: An alliance of leading businesses and industries working to support economic growth in Alabama. *edpa.org*

EDPA: Economic Development Partnership of Alabama

Education Trust Fund: The largest operating fund of the state. Programs and agencies supported by the fund include K-12 education, public library services, performing and fine arts, various scholarship programs, the state's education regulatory departments, and two- and four-year colleges and universities.

Exposure: A measure of possibility of loss, usually expressed in dollars or units.

Federal Interagency Forum on Aging-Related Statistics: Established in 1986 with the goal of bringing together federal agencies that share a common interest in improving aging-related data.

agingstats.gov

FFSL: Fortified For Safer Living

Fortified For Safer Living: A program promulgated by the insurance industry that specifies construction, design and landscaping guidelines to increase a new home's resistance to natural disaster.

Freeboard: A factor of safety usually expressed in feet above a flood level for purposes of floodplain management.

GMRP: Gulf of Mexico Research Plan

GOMA: Gulf of Mexico Alliance; pronounced "go-muh."

GOMESA: Gulf of Mexico Energy Security Act of 2006; pronounced "go-mesa."

Goodrich Aerostructures: A leading global supplier of systems and services to the aerospace and defense industry. *goodrich.com*

Governor's Office of Faith-Based and Community Initiatives: A state office that works to increase an ethic of service and volunteerism in Alabama, strengthen the capacity of the state's faith- and community-based organizations, and promote collaboration among individuals and organizations. *servealabama.gov*

Gulf Coast Ecosystem Restoration Task Force: Federal agency proposed by the Mabus Report and created on October 5, 2010, by President Obama. Its task is to coordinate oil-spill recovery efforts for the Gulf ecosystem. The chair is Lisa Jackson, administrator of the U.S. Environmental Protection Agency. This agency is working on a restoration strategy that's due October 4, 2011. *restorethegulf.gov*

Gulf Coast Recovery Council: Agency proposed by the Mabus Report for long-term coordination of Gulf Coast restoration (taking over from the Gulf Coast Ecosystem Restoration Task Force). Congress would have to create the council.

Gulf Coast Recovery Fund: Proposed by the Mabus Report, to be funded by civil penalties for the Deepwater Horizon spill.

Gulf of Mexico Alliance: A partnership of the five Gulf Coast states and 13 federal agencies, designed to increase regional cooperation to enhance the Gulf's ecological and economic health.

gulfofmexicoalliance.org

Gulf of Mexico Energy Security Act of 2006: A federal law that provides for sharing Gulf oil and gas lease revenues with Gulf producing states and the Land and Water Conservation Fund in order to finance coastal restoration projects.

Gulf of Mexico Research Plan: A plan, released in September 2009, to identify and work toward meeting Gulf research needs. The Gulf's four Sea Grant programs coordinate its implementation.

Gulf Shores-Orange Beach Tourism: Provides information about lodging, dining, attractions, events, museums, arts and culture, history and recreation. *agccvb.org*

Health Impact Assessment: A means of assessing the health impacts of policies, plans and projects in diverse economic sectors using quantitative, qualitative and participatory techniques. *who.int/hia/en*
cdc.gov/healthyplaces/hia.htm

HIA: Health Impact Assessment

Hybrid Kinetic Motors: A Chinese-American automobile company that designs, manufactures and markets advanced technology vehicles which are characterized by high fuel efficiency, low emissions, high performance and great affordability.

hkmotors.com

IBHS: Institute for Business and Home Safety

IHL: Mississippi Institutions of Higher Learning

Institute for Business and Home Safety: A non-profit, scientific research organization whose members include property insurers and reinsurers. Its mission is to reduce the social and economic effects of property losses due to natural disasters and to advocate for improved construction, maintenance and preparation. *disastersafety.org*

International Residential Code: A model building code developed by the International Code Council that has been adopted throughout most of the nation.

IRC: International Residential Code

Job Training Partnership Act: The law was enacted to establish programs to prepare youths and unskilled adults for entry into the labor force and to provide job training to economically disadvantaged and other individuals facing serious barriers to employment.

Land and Water Conservation Fund: A federal program that provides grants to federal, state and local governments for land and water acquisitions and easements. *nps.gov/lwcf*

LWCF: Land and Water Conservation Fund

Mabus Report: Officially titled “America’s Gulf Coast: A Long Term Recovery Plan after the Deepwater Horizon Oil Spill.” It’s named for Secretary of the Navy and former Mississippi Governor Ray Mabus, appointed by President Obama to create the plan. See it at restorethegulf.gov

MASGC: Mississippi-Alabama Sea Grant Consortium

Mississippi-Alabama Sea Grant Consortium: A federal-state partnership between NOAA and academic institutions in Mississippi and Alabama. The academic members are Auburn University, Dauphin Island Sea Lab, Jackson State University, Mississippi State University, the University of Alabama, the University of Alabama at Birmingham, the University of Mississippi, the University of Southern Mississippi and the University of South Alabama.
masgc.org

Mississippi Coastal Improvement Program: A set of construction and other projects, designed and administered by the U.S. Army Corps of Engineers, designed to strengthen Mississippi’s coast against storms and other threats. It was created after the catastrophic damage caused in 2005 by Hurricane Katrina. mscip.usace.army.mil

Mississippi Institutions of Higher Learning: Mississippi’s eight public universities, which are governed by a single board of trustees. The universities are Alcorn State, Delta State, Jackson State, Mississippi, Mississippi State, Mississippi University for Women, Mississippi Valley State and Southern Mississippi. ibl.state.ms.us

Mississippi Research Consortium: The four research universities of Mississippi: Jackson State, Mississippi, Mississippi State and Southern Mississippi. mississippiresearch.com

Mobile Area Chamber of Commerce: The Chamber is composed of approximately 2,500 businesses who have joined together to maximize their business opportunities. Membership is open to all businesses and individuals interested in contributing to the economic well-being of the Mobile area.
mobilechamber.com

Mobile Area Education Foundation: A nonprofit organization whose mission is to build community responsibility for improving public education outcomes in Mobile County. maef.net

Mobile Bay National Estuary Program: The Mobile Bay affiliate of the EPA’s National Estuary Program, which is designed to improve the quality of U.S. estuaries. mobilebaynep.com

Mobile County Metro Jail: The detention facility operated by the Mobile County Sheriff’s Office and located just south of downtown Mobile. The jail is used to house people awaiting trial on felony charges along with inmates arrested on misdemeanor charges by the Sheriff’s Office, the Mobile Police Department or any agency in the county that does not operate its own jail. Metro Jail includes a main facility plus a minimum security barracks.
mobileso.com

MRC: Mississippi Research Consortium

MsCIP: Mississippi Coastal Improvement Program; pronounced “miz-sip.”

National Coastal Data Development Center: To support ecosystem management, the center collects national coastal and oceanic data from a variety of sources and makes it accessible via the Internet. It is a branch of the National Oceanic and Atmospheric Administration, housed at the Stennis Space Center in Mississippi. ncddc.noaa.gov

National Estuary Program: See Mobile Bay National Estuary Program.

National Flood Insurance Program: Created as an alternative to disaster assistance, the program within the Federal Emergency Management Agency provides flood insurance and manages floodplains through regulation. It also maps floodplains to arrive at actuarial rates for flood insurance.

National Ocean Policy: A coordinated system for managing America's oceans, coasts and Great Lakes, established by President Obama in July 2010.

whitehouse.gov/administration/eop/oceans

National Oceanic and Atmospheric Administration: A scientific agency within the federal Commerce Department that focuses on the condition of the oceans and atmosphere. It forecasts weather, monitors climate, manages fisheries, helps restore coastlines and supports marine commerce.

noaa.gov

National Oceanic and Atmospheric Administration Disaster Response Center: Under construction near the Greater Gulf State Fairgrounds in west Mobile, the center will be a centralized coastal crisis support facility and communications hub. The center will help decision makers in their efforts to prepare for, assess and respond to coastal ecological and economic distress. The 15,000-square-foot building is scheduled for completion in 2011.

oceanservice.noaa.gov/hazards/drc

Natural Resource Damage Assessment: A federal process that assesses damage to natural resources from a spill of oil or other hazardous substances and restores the damaged areas to health. The parties responsible for the spill are required to pay for restoration. *restoration.doi.gov*

NCDDC: National Coastal Data Development Center

NEP: National Estuary Program; in coastal Alabama, this refers to the Mobile Bay National Estuary Program.

NFIP: National Flood Insurance Program

NGI: Northern Gulf Institute

NGO: Nongovernmental organization

NMTC: The New Markets Tax Credit

NOAA: National Oceanic and Atmospheric Administration; pronounced "no-uh."

Nongovernmental Organization: An organization that operates independently from any government. The term usually refers to nonpolitical organizations with social-improvement goals.

Nonpoint-Source Pollution: Pollution that comes from diffuse or multiple sources, such as runoff following a storm.

NOP: National Ocean Policy

Northern Gulf Institute: A research and education partnership between NOAA and five academic institutions, led by Mississippi State University and also including the University of Southern Mississippi, Louisiana State University, Florida State University and the Dauphin Island Sea Lab.

northerngulfinstitute.org

NRDA: Natural Resource Damage Assessment; pronounced "ner-duh."

Occupational Safety and Health Administration: The federal agency created in 1970 to ensure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance. The agency, part of the Department of Labor, is often referred to as OSHA. *osha.gov*

Oil Pollution Act of 1990: Enacted after the 1989 Exxon Valdez oil spill, it sets responsibility for oil spill mitigation, costs and damages, subject to liability caps. *epa.gov/oem/content/lawsregs/opaover.htm*

Oil Spill Liability Trust Fund: A Clean Air Act-mandated repository for all civil penalties associated with oil spills, designed to fund cleanup and response efforts for future oil spills.

OPA 90: Oil Pollution Act of 1990; “OPA” is sometimes pronounced “oh-puh.”

Oyster Drills: Snails that prey upon oysters and favor higher salinity waters.

Oyster Fouling: A general term to describe the various organisms that encrust and, in some cases, burrow into oysters. These include barnacles, mussels, polychaete worms, etc.

Oyster Tonging: A method of harvesting oysters, using a set of long handled rakes called oyster tongs, commonly used in Alabama.

Point-Source Pollution: Pollution that comes from a single source, such as a factory.

Premium: The price of insurance protection for a specified risk for a specified period of time.

Reinsurance: Insurance sold by reinsurers to insurance companies that sell insurance to the public,

protecting the insurance company from major losses due to major disasters such as hurricanes, earthquakes and floods.

Renourishment: The process of bringing in sand from elsewhere (it’s usually pumped in from offshore) to enlarge a beach.

Revolving Loan Fund: Using oil spill relief funds received from BP or other sources related to the oil spill and allocated to the Revolving Loan Fund (RLF), monies will be placed in an account for the specific purpose of aiding small businesses whose borrowing capacity has been diminished due to the oil spill.

SBA: Small Business Administration

SECOORA: Southeast Coastal Ocean Observing Regional Association

Setback: In land use, it is the distance which a structure is removed from a street or road, a river or other stream, or a shore or floodplain.

Small Business Administration: A United States government agency that provides support to small businesses. The mission of the Small Business Administration is to maintain and strengthen the nation’s economy by enabling the establishment and viability of small businesses and by assisting in the economic recovery of communities after disasters. *sba.gov*

Smart Coast: A nonprofit organization that promotes regional planning and “smart growth” for the Alabama coast through education, research and dialogue. *smartcoast.org*

Southeast Coastal Ocean Observing Regional Association: A private entity that integrates coastal

and ocean-observing data in the Southeast United States in partnership with other private entities and federal agencies. *secoora.org*

Stennis Space Center: The John C. Stennis Space Center; a National Aeronautics and Space Administration facility in southwest Mississippi. It's a major center for scientific data about the Gulf of Mexico. Its Gulf of Mexico Initiative provides NASA Earth Science data to assist environmental projects identified by the Gulf of Mexico Alliance. *ssc.nasa.gov*

Subcontractor: An individual or company hired by a general or prime contractor to perform a specific task as part of an overall project.

Subsidize: To assist or support individuals or groups, usually with financial aide provided by the government for a specific purpose.

The Henry J. Kaiser Family Foundation: A non-profit, private operating foundation that focuses on major health care issues facing the United States, as well as the U.S. role in global health policy. The foundation serves as a nonpartisan source of facts, information and analysis for policymakers, the media, the health care community and the public. *kff.org* and *www.statehealthfacts.org*

The Nature Conservancy: An international conservation organization that works to protect ecologically important land and water areas, often by purchasing them. *nature.org*

The New Markets Tax Credit: Program permits taxpayers to receive a credit against federal income taxes for making qualified equity investments in designated Community Development Entities (CDEs). Substantially all of the qualified equity investment must in turn be used by the CDE to pro-

vide investments in low-income communities.

ThyssenKrupp: One of the world's largest steel producers. *thyssenkrupp.com*

Underinsured: Having various degrees of insufficient insurance coverage.

U.S. Army Corps of Engineers: A federal engineering, design and construction management agency. Among its missions are environmental regulation and ecosystem restoration. The Corps administers the federal wetlands permitting program. *usace.army.mil*

USS Alabama: *ussalabama.com*

Zeke's Landing Marina: A six-acre complex located on Cotton Bayou in Orange Beach, Alabama, featuring complete marine facilities and home of Zeke's Charters, the Gulf Coast's largest charter fishing fleet. *zekeslanding.com*

100-1000 Restore Coastal Alabama: A project aiming to reverse years of damage from pollution, storms and most recently the Deepwater Horizon oil disaster, the partnership will collaborate to build 100 miles of oyster reefs and plant and promote the growth of 1,000 acres of marsh. *100-1000.org*

11 Acknowledgements



ACKNOWLEDGEMENTS

This book was researched, written, edited, and published in less than 90 days. To do that, it took a motivated core team supported by hundreds of others. Some of the people who contributed the most didn't sit on committees or work on the paid staff. They just lent a hand when we needed their help. Key folks in that group deserve to be singled out.

Sherry Lee and Judi Rojeski at the Mobile Press-Register added much of our workload to theirs, often showing us better, faster ways to get where we wanted to go. Thank you, Sherry and Judi.

We are grateful to another friend at the Press-Register, too. Photo editor Bernell Dorrough extended his workdays to help us find the right photographs at just the right moment. Without Bernie and the staff photojournalists who captured most of the images in this book, it would have been a drearier production.

When we needed advice on everything from printers to media strategy, Carol Hunter at the Downtown Mobile Alliance provided it. And she donated her own time to helping us manage key meetings.

We enjoyed support from faculty and staffs at all the state universities, even though our hurry-up schedules rarely synced with academia. Special thanks should go out to Dr. Keivan Deravi and his grad students – especially Barbara Buchanan – at Auburn University Montgomery for their guidance at key moments.

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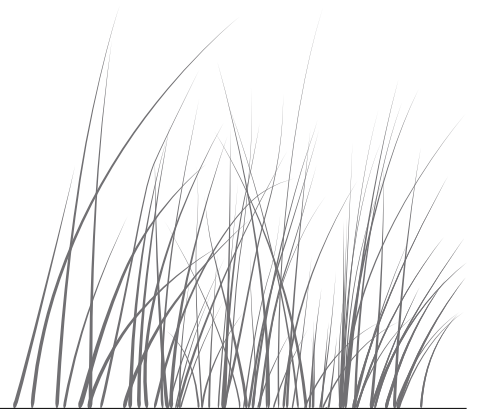
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Appendix



05 A Healthy Environment Documents

Alabama Coastal Resilience and Beneficial Use, Operation, Recovery and Restoration concept (ARBORR)

The U.S. Army Corps of Engineers has proposed a systemwide plan for restoring the Alabama coast and enhancing its resiliency. It's similar to the Mississippi Coastal Improvement Program (MsCIP) that the Corps initiated in Mississippi after Hurricane Katrina. The Corps emphasizes that this is a working concept and that all projects would be screened for acceptability, effectiveness, environmental impact and other factors before being proposed for construction.

Goals:

1. Prevention of, recovery from and restoration following oil spills
2. Hurricane and storm damage reduction
3. Preservation of fish and wildlife
4. Reduction of saltwater intrusion
5. Prevention of shoreline erosion
6. Restoration of human use losses
7. Protection of other water-related resources

Lines of Defense:

1. Barrier islands
2. Mainland dunes and artificial berms
3. Coastal habitats (emergent tidal marshes, wet pine savannah, submerged aquatic vegetation, etc.)
4. Seawalls, elevated roads
5. Landward barriers, surge gates

Implementation of Comprehensive Plan:

1. Phase I Projects (construction can be initiated within six months)
2. Phase II Projects (construction can begin in one to two years, after planning, engineering and design)
3. Phase III Projects (long term; construction can begin within three years or later)
4. Other Projects (education, research, and other nonconstruction projects)

Screening and Formulation Process:

The following questions can be used to evaluate the merits of or formulate alternatives to proposed projects.

1. Is the project at a priority site (such as coastal Alabama)?
2. Was the problem the project addresses caused or exacerbated by the oil spill? And does the project meet one of the seven goals listed above?
3. Is the project cost effective?
4. Can the project be engineered and designed within a given time frame, and can the required environmental permits and clearances be obtained?

5. Can the project be ready to start within six to 12 months with no delaying issues? Is it acceptable to the public? Does it complement ongoing local, state, or federal activities?
6. Do the benefits outweigh the cost?
7. Is it technically feasible (actually solving the problem), environmentally sound (minimizing adverse environmental impact and not causing further environmental damage), and economically feasible?
8. Would this project be classified as immediate (beginning within six to 12 months), intermediate (beginning within one to three years), or long term (beginning more than three years from now)?
9. Is the need for this project immediate or long term? Is it small scale or large scale? Is the damage it addresses minimal or severe? In addition to solving a specific problem, does the project contribute more generally to a resilient coast, and is it part of a systemwide approach or solution?
10. Projects that make it this far can then be prioritized using a variety of methods.

Source: U.S. Army Corps of Engineers

10 Infrastructure: How Do We Choose? Documents

CRC Infrastructure Sub-Committee

Explanation of Project Identification

Template Process & Instructions

CRC Guidance for Infrastructure Subcommittee

In the aftermath of the Deepwater Horizon Oil spill, on September 27, 2010, Governor Riley issued Executive Order Number 52, creating “the Coastal Recovery Commission of Alabama, to provide expertise, experience and leadership for development of a transparent, unbiased and well-considered Report, detailing the Road to Resilience for South Alabama.... [T]he Coastal Recovery Commission of Alabama shall capture, develop and organize recommendations, projects and programs for the restoration of public health, the economy and the environment in Mobile and Baldwin counties and the waters of the Gulf and State land underlying those waters.”

“The Coastal Recovery Commission shall, by **December 15, 2010**, recommend to the Governor and the Governor-Elect a **Restoration and Resiliency Plan, including recommendations, projects and programs for the restoration** of public health, the economy and the environment in these coastal counties and the waters of the Gulf and State land underlying those waters.”

Excerpts from CRC Mission Statement: A Roadmap to Resilience

“... [To] build regional capacity for long-term resilience. We must position ourselves to respond not only to future oil spills but also to other forces beyond our control, including everything from hurricanes to sudden shifts in the economic environment...we need to develop and implement strategies across a broad range of categories that strengthen our communities’ – and our region’s — adaptability and sustainability over time.”

“We will propose bold but attainable goals, based on the most authoritative research and reality-tested best practices.”

*“... this is entirely different program [than the claims process]. It’s meant to lay the foundation for long-term planning; planning that will likely unfold over decades. We want a **roadmap to resilience.**”The Coastal Recovery Commission is charged with identifying strategic investments and projects that will promote a sense of community and connectivity, and build more resilient, and sustainable improvement in the quality of life for Coastal Alabama in the areas of a Healthier Environment, a more robust, diverse and Healthier Economy, and a Healthier Society.*

Threats and Events to be addressed by the CRC include:

- Hurricanes
- Terrorism
- Major industrial or transport mishap (i.e., chlorine, explosive gas leak)
- Loss of major employer or critical infrastructure failure/disaster
- Drought
- Pandemic
- Public Perception outside the region of the attractiveness of region as a destination or safety of Gulf seafood harvest

Background of Infrastructure Subcommittee Working Group

A working group of the Infrastructure Sub-Committee has developed the following Project Identification Template to provide consistency in project description and quantification of project impacts, both positive and negative. This product has been reviewed by and incorporates the comments of the entire Sub-Committee. The Coastal Recovery Commission (CRC) will not be the decision making authority for project selection. The project selection process (what entity and by what criteria) has yet to be defined.

The CRC staff and leadership have indicated that a list of projects will be included with the report as an appendix. An appendix to the report will list projects that have been proposed by various CRC subcommittees. Discussion is ongoing and no decisions have been made. A few historical projects may be highlighted in the report as examples only, to illustrate the proposed screening process. Because of the anticipated large number of project suggestions, we have been asked to limit each example to no more than 6 pages (one sided) including attachments. The purpose of the template is to identify the projects including relation to the stated goals of the CRC. The evaluation team is expected to solicit additional information in the future. At this juncture, we don't know who will comprise this evaluation team or how it plans to evaluate, but we hope that our suggestions will be considered.

This working group believes that the following criteria are consistent with the Governor's Proclamation and the Roadmap to Resiliency and could form the basis of a screening and selection process to be recommended to the ultimate decision making authority, yet to be determined:

1. **Coastal Recovery:** Regional beach restoration funding and maintenance capability, preservation of the Gulf's natural resources/quality of life; rapid recovery assistance to business, especially small business that define the character of the Coastal economy.

2. **Resiliency:** Defined as “the ability of economic entities to maintain function and recover quickly from a disaster” (CARRI Research Paper #8). The Resiliency of a system, region or economy has three aspects:
 - a) Reduced probability of failures
 - b) Reduced consequences from failures
 - c) Reduced time to recovery
3. **Transformation:** Progressive advances in the Region’s capacity and ability to develop and implement a thoughtful vision that creates a significant improvement in quality of life, commerce, or environment, and provides a diverse economic engine capable of better sustainability and stability through impacts. (See Transformation attachment from Think.)
4. **Regionalism:** To promote regional solutions to regional challenges through collaboration, alliances and broad-based Regional entities to best capture economies of scale, and better develop and implement a Regional Strategic Plan and Vision. Regionalism is not just cooperation between a few neighbors doing what is best for them. Regionalism provides collateral benefits to Economic Development, Resiliency, and Economic Diversification. See Department of Labor Workforce Innovation in Regional Economic Development (WIRED) conceptual framework attached.
5. **Economic Diversification:** Key strategy for resiliency and transformation. Without compromising the character, environment, and quality of life in Coastal Alabama, where possible, but not limited to, leveraging our existing strengths of our beaches, bay, port and transportation hub, industrial base, higher education and medical facilities (indicative list, not definitive).

Project Impact and Descriptors

In addition to these five criteria, the Infrastructure Sub-Committee working group further recommends the additional *descriptors* of project scope and impact similar to the following be considered in the evaluation and screening process. With further development and refinement, such *project descriptors* may help quantify the relative impact and attractiveness of projects and may be a useful in evaluation process when used as the multiple vectors of a Spider Diagram, or similar analysis tool.

- Cost (inverse scale). Grouping of projects of similar size might lead to a fairer evaluation comparison of benefits of projects of all sizes (including proposed studies.)
- Environmental Impact (-) or benefit (+)
- Implementation Obstacles, i.e., regulatory, organizational
- Leverage on CRC funding, matching funds, either public or private
- Immediacy of Project impact

- Impact on Workforce, both employment level and skill mix/development

Each Project submitted on the Project Identification Template will be scored at a future point by a yet to be named group on a 1-100 scale for each of the Project Criteria and Project Impact & Descriptors categories listed above. The results of this scoring will be tabulated in a table or matrix and will be graphically depicted in a Spider Diagram. Projects do not have to score highly in all categories to be evaluated as worthy or eligible for subsequent review and possible funding.

The Project Identification Template can be found on the CRC website [www.crcalabama.org].

CRC Infrastructure Sub-Committee

Project Identification Template and Instructions

SAMPLE

Project Identification Template

Instructions: Please complete all of the information requested with the best information you have available. Limited attachments are acceptable if necessary to adequately describe the project but the **total length should be limited to 6 pages** one-sided (including attachments). This Identification Template is intended as a preliminary mechanism by which proposals and projects to improve the resiliency of Coastal Alabama are solicited and captured with some consistency of format, scope definition, and project benefits and impact.

This is only a first step: proposals and projects will not be funded based upon this submittal. Further information and details will be solicited at such time as the screening and funding process is more fully defined.

I. What – Project Information/Basic Facts

1. Project Scope _____
2. Project duration or schedule by phase and status of any work in progress _____
 - 2.1. Conceptual and Feasibility Planning, Engineering, Construction _____
3. Estimated Cost (plus or minus 30%) _____
 - 3.1. Indicate level of confidence in accuracy of these estimates _____

II. Why – Project Description relative to Impact and Criteria

1. Identify what need, threat or opportunity that this project, study, or recommendation will address _____

2. How does this project or recommendation address and impact the recommended evaluation criteria:

2.1.1. Coastal Recovery _____

2.1.2. Resiliency _____

2.1.3. Transformational _____

2.1.4. Regionalism _____

2.1.5. Economic Diversification _____

3. Project Economics _____

4. Identify Direct Project benefits to Coastal Alabama, including avoided costs, consequence of "No Build" alternative. _____

4.1. Impact on employment, job training and development, both short term and permanent _____

4.2. Oil spill mitigation outside of claims process _____

5. Identify Indirect benefits and costs

5.1. Collateral Benefits to the objectives of Healthy Environment, Healthy Economy and Healthy Society (subjective responses allowed) _____

5.2. Collateral Costs or impacts to the objectives of Healthy Environment, Healthy Economy and Healthy Society (subjective responses allowed) _____

5.3. Connectivity and Linkage to other projects or initiatives: Does this project complement or compete with other projects? What other projects would be precluded if this project is funded? _____

III. Who/How - General Information

1. Name and contact information for Entity, Collaboration or Person submitting project or recommendation nomination. _____

- 1.1. *Entities and communities sharing a common threat or need are encouraged to collaborate for a joint/combined project submittal to raise the profile of the issue and solution to be addressed. Also please indicate the level of community support or resistance and hurdles to collaboration.*
2. Identify Sponsoring Entity for oversight and accountability if different from above.
 - 2.1. Existing or to be created? _____
 - 2.1.1. If to be created, what parties or interests must be involved and what level of effort is required to do so? _____
 - 2.2. Describe governance, organizational capacity, availability of skills, experience of sponsoring entity to implement the Project _____
 - 2.3. Project complexity: Hurdles and barriers to project implementation, completion and sustainability. Identify regulatory issues. _____
3. Identify any known or anticipated administrative, regulatory, or legislative action that would be required at either the local, state, or federal governmental level. _____
4. Requested funding from Coastal Recovery Fund (CRF) _____
5. Identified potential funding sources other than the CRF _____
 - 5.1. Leverage or multiplier on CRF investment: matching funds, public or private _____
 - 5.2. Public Private Opportunities, user fees, Federal funds, private foundation grants, bonding capacity, etc. _____
6. Forecast of ongoing maintenance or operating costs and source of funding if not self sustaining _____

List of Project Submittals to the Infrastructure Subcommittee

To demonstrate how a project “choosing tool” (See Chapter 9) might work with real projects, the infrastructure subcommittee invited regional entities to fill out sample project template applications that explained how their proposals related to key criteria explored by committees and subcommittees during the 90 day CRC process. (See sample applications in the previous pages of the Appendix.)

Here’s the list of projects and sponsoring entities that replied and met the December 7, 2010 submittal deadline. To see the complete template forms the groups completed, look under Resources on the CRC website: www.crcalabama.org.

Project Description	Sponsoring Entity
Improve Bay water quality & sanitation resilience by building regional wastewater system	Alabama Gulf Coast Regional Sewer Board
Enhance Port competitiveness & reduce area truck traffic by completing multiple projects of Master Strategic Plan	Alabama State Port Authority
Baldwin Beach Express: Construct four lane limited access toll connector from I-10 to I-65	Baldwin County Commission
Fund a Baldwin Beach Trust for long term restoration solution to ongoing & tropical event beach erosion	Baldwin County Commission
Diversify Gulf Coast tourism base by building Gulf State Park Convention Center	Baldwin County Commission initial sponsor
Expand Eastern Shore Bike & Hike Trail	Baldwin County Trailblazers
Assist Baldwin economic development & industry recruitment by website enhancement	Baldwin Economic Development Alliance
Increase Baldwin electrical resiliency through multiple projects	Baldwin EMC
Create a certified, 3,000 acre mega-site to diversify Baldwin’s economy	Baldwin Economic Development Alliance
Increase pumping capacity of Foley Water Plant	Foley Utilities Board
Complete GIS Mapping of City of Mobile Drainage Systems	City of Mobile
Restore lost wetland habitat due to sedimentation of Dog River and Tributaries	City of Mobile
Construct new Police Headquarters	City of Mobile
Construct a Mobile Regional Recycling Center	City of Mobile
Construct new Public Works facility	City of Mobile
Dredge lakes of Langan Park to restore recreational use & wildlife habitat	City of Mobile

Multiple projects (16) to reduce rain event flooding, stream sediment loading, repair of major transit & evacuation routes	City of Mobile
Eliminate pollution sources & enhance Blakely River, Mobile Bay D'Olive Creek water quality	Daphne Utilities
Prevent litter from entering Dog River Creek with Bandalong Litter Trap	Dog River Clearwater Revival
Promote habitat revitalization and nature based tourism via a Dog River Scenic Blueway	Dog River Clearwater Revival
Improve Callahan Airport & construct aeronautical vocational training facility	Fairhope Airport Authority
Acquire land and develop a technology/industrial park	Fairhope Industrial Development Board
Rehabilitate sewer system to minimize storm water run offs and sanitary sewer overflows	Foley Utilities Board
Promote economic development along Foley Beach Express by 6 mile extension of natural gas pipeline	Foley Utilities Board
Construct new electrical substation to facilitate development of Foley Industrial Park	Foley Utilities Board
Expand water and sewer service along Foley Beach Express to facilitate economic growth	Foley Utilities Board
Perform hydrogeologic analysis & develop regional aquifer protection strategies	Geological Survey of Alabama, Groundwater Dept.
Improve Dog River water quality by providing sewer service to residences now on septic tank	MAWSS
Protect Mobile's water supply reservoir from acts of terrorism or transportation mishaps	MAWSS
Provide alternate emergency water supply to single existing source of Big Creek Lake	MAWSS
Construct Big Creek wetlands for removal of sediment & pollutants in watershed tributaries	MAWSS
Construct emergency water backup supply to Spanish Fort	MAWSS

Improve rail infrastructure to Brookley Aeroplex to advance economic performance & job growth	Mobile Airport Authority
Increase airport competitiveness by building intermodal parking & transportation hub	Mobile Airport Authority and regional partners
Create incentive fund to recruit and retain low fare air service to Mobile Regional Airport	Mobile Airport Authority, MACC & regional partners
Facilitate disaster response through construction of facility adequate to co-locate multi-agency response teams	Mobile County Emergency Management
Construct 9 public shelters rated Category 5 throughout Mobile County	Mobile County Emergency Management
Replace unincorporated Mobile County weight restricted bridges	Mobile County Public Works
Improve south Mobile County Evacuation Route to Mobile Regional Airport	Mobile County Public Works
Increase south Mobile county evacuation capacity with collateral improved Public School Access	Mobile County Public Works
Acquire additional park & recreational space including waterfront & ecologically sensitive areas	Mobile County Public Works
Provide wastewater treatment facilities for unincorporated Mobile County	Mobile County Public Works
Reconfigure Mobile County microwave system to increase resilience & communication continuity.	Mobile County Public Works
Upgrade Mobile County radio system to be FCC P25 compliant	Mobile County Public Works
Construct wall to protect Mobile Metro Jail from Cat 3 storm surge	Mobile County Public Works
Increase funding for program for beach and marshland vegetation restoration by MCPSS students	Mobile County Soil and Water Conservation District
Construct food storage & distribution facility for economic and disaster relief	Prodissee Pantry, Spanish Fort
Expand existing small business revolving loan fund to provide emergency cash flow for disaster relief	South Alabama Regional Planning Commission

Create one stop center for assessment & referral of stress related disorders	To be created
Eliminate storm water flooding of critical evacuation corridor at I-10 & Hwy 59 interchange	Town of Loxley
Construct CR 31 connector to SH 59 to increase evacuation capacity & economic development	Town of Loxley
Improve & increase load capacity of Loxley Truck Trail 17	Town of Loxley
Increase sewer system capacity to eliminate storm water run offs and sanitary sewer overflows	Town of Loxley
Create a hurricane storm surge network to document characteristics of tropical storm events	U.S Geological Survey
Assess regional groundwater aquifer saltwater intrusion & maximum sustainable withdrawal rates	U.S. Geological Survey
Test and monitor Coastal Alabama aquifers	U.S. Geological Survey

Proposals

Coastal Recovery Commission committees and subcommittees met regularly over the course of our 90-day initiative, reviewing ideas that might support the goals of a healthier south Alabama environment, society and economy. Each group defined its tasks on terms that made the most sense to them. The main themes of their discussions and the recommendations that gained the most traction are reported in the chapter narratives under the main headings of Healthy Environment, Healthy Society and Healthy Economy. Here, to honor the efforts of all those who took part in the discussions, we present the list of projects, proposals and policy recommendations that commission members and their advisors put on the table over the course of the last three months.

To fund and implement every one of these proposals would require a budget with too many zeroes to guesstimate, which underlines the difficulty of the job ahead: how to sort through a long wish list and organize it in ways that allow for the best strategies to end up at the top.

Healthy Environment

Develop an actionable, comprehensive, ecosystemwide plan for coastal restoration and resiliency.

Carefully consider the U.S. Army Corps of Engineers' ARBORR plan for making Alabama's coast more resilient.

Restore barrier islands and beaches.

Achieve the optimal yield of each individual Gulf fishery.

Create a Coastal Environmental Management Council that would have a strong advisory role regarding proposed construction projects, develop a coastal resiliency plan, involve all coastal constituencies and stakeholders in planning and decision-making, work to improve data collection and dissemination, serve as a central public-information clearinghouse during disasters, and act as liaison between local entities and outside authorities during emergencies.

Work toward having water throughout coastal Alabama that is fishable, swimmable and drinkable.

Create a world-class marine and coastal institute focusing on the Gulf of Mexico.

Renourish beaches as needed.

Place dredged sand from Mobile Pass in locations that allow it to reenter the natural littoral transport system.

Construct dunes and other natural habitats on beaches as needed.

Align all restoration and resiliency initiatives with other similar or complementary projects and programs in coastal Alabama and elsewhere on the Gulf.

Restore and enhance habitat for fisheries as needed.

Collect fishery-independent data regarding fisheries, rather than fishery-dependent data.

Consider replacing sections of the Mobile Bay Causeway with flow-through bridges, proceeding cautiously with pilot programs so as not to release toxins stored in sediment.

Include in the Coastal Environmental Management Council's resiliency plan some regionwide "smart growth" land-use planning and, probably, hurricane-resistance building codes.

Create a coastal land trust fund to plug funding gaps so that worthy projects could go forward.

Develop a decision-making matrix that the Coastal Environmental Management Council can use for examining and prioritizing proposed construction projects.

Increase extensively, at the direction of the Coastal Environmental Management Council and the marine and coastal institute, the permanent monitoring of the Gulf ecosystem and collection of scientific data.

Ensure that extensive real-time data about the Gulf ecosystem is available in one user-friendly place.

Optimize real-time data displays for smart phones and other handheld devices.

Identify and fund worthy projects to improve water quality that have already been proposed by various organizations, such as the Mobile Bay National Estuary Program.

Pave (with pervious pavement) or otherwise stabilize dirt roads in order to control erosion and sediment runoff.

Educate the public about the importance of clean water and steps individuals can take to improve water quality.

Support proposed legislation that would send money from Clean Water Act fines to spill-affected states instead of into a trust fund for future oil spills.

Expand and enhance the capabilities of the Claude Peteet Mariculture Center in Gulf Shores as both a hatchery and a research center, using the center to enhance Alabama's sportfishing industry and preserve endangered or threatened species.

Healthy Society

Health

Institute an electronic records sharing system among health providers, and improve data collection to better identify health issues and monitor programs to gauge effectiveness.

Monitor long-term health effects of oil spill.

Adjust the wage index so that Alabama health centers would be paid a greater rate, more in line with the national average, for care of Medicare patients.

Increase federal support for medical training.

Increase the number of hospital-based mental health beds.

Support infrastructure improvements so that hospitals—notably the area's only Level I trauma center, the University of South Alabama—can be prepared in the event of a hurricane or other disaster.

Support policies that promote independent living for older Americans.

Attract and maintain health-care workers through scholarships and/or loan repayments.

Expand hours and locations of primary care clinics.

Improve trauma care in Gulf Shores and Orange Beach.

Purchase a mobile unit to transfer mental-health patients in crisis from home to hospital.

Develop a peer-listener training program to prepare culturally sensitive liaisons who would help identify people with mental-health issues and refer them to mental health professionals for help.

Coordinate and expand faith-based services. Community colleges would help educate faith leaders in carrying out a program that focuses on education, healthy choices, chronic-disease management, first aid and mental-health issues.

Open a position for a regional disaster response coordinator for health-care issues.

Ensure liability protection for visiting health-care workers after disasters.

Establish a mental-health disaster-response plan that includes staffing shelters with counselors .

Create an emergency-assistance loan that health-care centers could access after a disaster.

Establish a plan/location for nursing-home patients during disasters.

Create a uniform health-care worker identification badge.

Institute respite/revitalization/stress-relief programs for caretakers during times of crisis.

Carry out coordinated disaster drills among area's health-care centers.

Ensure the solvency and readiness of nonprofits at the front line of disaster response.

Implement mixed-use zoning and development that favors walkable and bikable communities.

Support regional mass transit to help alleviate traffic congestion and connect more rural areas with urban centers.

Institute municipal ordinances to ban smoking in public places.

Pursue rails-to-trails projects in Mobile and Baldwin counties, turning abandoned rail lines into walking and biking paths.

Promote youth programs for drug education and pregnancy prevention.

Promote exercise and wellness programs in the business community.

Link the central Gulf Coast, from Florida to Louisiana, with light rail.

Ensure that a new crossing over the Mobile River is adaptable for light rail and includes a walking/biking path that would connect with the trail that runs along the Eastern Shore.

Support the implementation of parks and parkway projects that already have been adopted by local municipalities.

Support "green building" methods.

Pursue river trails, such as the Dog River Scenic Blueway.

Plant community gardens and establish organic food co-ops.

Connect trails across city/county lines.

Devote 10 percent of project dollars to retrofit communities with sidewalks/bike trails/green space and require all new projects to include the above, plus mass transit rights of ways.

Require fire protection every 1,000 feet where public water is available.

Connect our communities in healthy ways and discourage developments that are dependent on cars for all components of use.

Education

Grant scholarships for children of low-income, oil-affected families to local universities, community colleges and technical schools.

Enhance science curriculum to better reflect Alabama's coastal environment.

Create a higher-education institute for disaster preparedness, response and mitigation, and data collection.

Form a network of collaborative learning, involving higher education and government, to offer cross-disciplinary degrees or certificates focused on building disaster resilience.
Enhance partnerships between businesses and education.

Create coordinated partnerships to assist those hardest hit in a disaster, and increase collaboration between local school boards and among local colleges.

Expand the reach of the business support centers set up in Gulf Shores and Bayou La Batre after the storm. Permanent facilities would be built in both counties and, operated through a community college partnership, would be able to respond in disasters and meet day-to-day workforce development needs.

Install wireless capabilities in schools.

Make available more career tech opportunities in K-12, and better track students.

Install state-of-the-art technology in every K-12 classroom, and ensure every student has access to computers.

Ensure secondary education incorporates the arts and foreign languages.

Integrate “green school” technology when renovating or building schools.

Allow multiple pathways to graduating, particularly for those students whose lives have been interrupted by disasters, natural or man-made.

Expand adult educational opportunities.

Public Safety

Implement a common radio system for Mobile and Baldwin counties, so first-responders can better communicate.

Acquire air support for Mobile and Baldwin sheriff’s departments.

Create a uniform law enforcement identification card.

Construct a new emergency operations center for the Mobile County Emergency Management Agency next to the National Oceanic and Atmospheric Administration Disaster Response Center and the 911 Center.

Build a south Baldwin County jail for Orange Beach and Gulf Shores that would be located inland away from the water.

Expand the Mobile County-Metro Jail, including adding a mental-health wing, and construct a dike to prevent flooding and having to furlough inmates during storms.

Extend the Foley Beach Express to Interstate 10, then up to Interstate 65, opening up a north-south evacuation route and a quick path in for vehicles responding to a disaster.

Build a local forensics lab to test chemical and biological contaminants.

Expedite Mobile River crossing to alleviate traffic congestion on the Bay Way.

Create a perpetual fund for research of law-enforcement best practices, and commission local universities in that research.

Create an account that would fund, though loans, overtime and equipment purchases during emergencies. Require future schools to be built to withstand Category 3 hurricanes so they can be used as shelters.

Reserve shelter space for emergency responders and those with mental-health issues and special needs.

Equip fire departments with the necessary tools to respond to disasters.

Healthy Economy

Seafood

Create off the Alabama coast a new and potentially revolutionary assemblage of mid-water fish attraction devices (FADs) to bolster charter-boat and recreational fishing

Construct key infrastructure to support commercial and sport fishing and new ventures in ecotourism.

Replant, Restock, and Revitalize Program – Reseed oyster beds, restock depletions in fisheries and revitalize the spawning areas for the shell fish.

Establish BP Competitive Fisheries Matching Grant Program – money match for Department of Commerce economic recovery dollars.

Establish BP Marketing Partnership Program – matching dollar-for-dollar targeted marketing budgets (domestic and foreign) to include joint and collaborative marketing between BP and the fisheries. Both will need to reinvent their image.

Establish BP Back to the Dock — an incentive based program administered by a quasi-governmental entity (i.e. PDD's) to help fishermen get back to fishing and out of the claims process. The program is based upon 2009 pricing and provides for a 30% increase in revenue per pound of catch. The premise is that if the boats do not return to fishing BP may be obligated to hold eligible claimants whole for the total catch they made during that month in 2009 at 100%.

Establish marketing campaign fund for the sport-fishing, tourism, and seafood industries to regain market share. Consider a campaign to promote ecotourism, given all of the photos and coverage depicting a negative image.

Identify a credible source and process to communicate information to the public on seafood information and safety.

Collect data proving recovery of the coast – particularly showing clean areas, clean fisheries, etc., in support of marketing efforts

Establish Fuel to Fish Program – discounted fuel (use dye to distinguish) to offset mobilization cost for the fisheries right now. BP, Ports, National Guard, County/Parish, or other public body can distribute.

Establish Deductible Match Program – match insurance deductibles dollar for dollar.

Establish BP Fisheries Loan/Grant Program – GO Zone-type loans or grants that go to the fishermen, seafood processors, etc.

Establish BP Competitive Manufacturing Grant Program – to reinvigorate the processors to develop a greater value-added product to re-establish market share.

Provide funding for Manufacturing Extension Partnership (MEP) services to extend enhanced technical assis-

tance to manufacturing companies as well as local governmental entities in the impacted areas.
Create Grants Program Trust Fund – Industry Trade Board of Directors to administer trust funds to incentivize, either grant program or guaranteed loan program.

Develop/identify new products for exports marketing.

Study cooperatively owned facilities for waste-management services.

Advance Working Waterfront Plan, including dockage, wharfs, draws for boats.

Seek regulatory reform relief—i.e. ramp up dock assessment and fuel production/subsidies.

Promote Aquaculture Development, enhance geographical diversity.

Encourage harvesting efficiency, propulsion of boats.

Establish habitat restoration projects, creating or sustaining long-term jobs.

Establish regional wastewater treatment.

Discover improved ways of disposing of fish wastes; explore drying plants for fish carcasses.

Research FADs (fish attraction devices) for pelagic species, in open water.

Interact with like entities promoting gulf fisheries.

Begin immediate promotion targeting regional and national markets.

Secure funding to barge the Tombigbee River bridge on US-84 at Coffeerville—which is scheduled to be replaced within two years—for sinking as an offshore reef.

Tourism

Build Gulf State Park Convention Center/Facility; Dauphin Island Conference Center.

Create bay ferries between beaches, Eastern Shore, downtown Mobile.

Extend Foley Beach Express to I-10 and I-65.

Expand Fairhope Airport.

Organize a state-level expert panel (primarily industry) to evaluate issues relating to drilling off our coast that can be used to interject a coastal voice into the state and national dialogue.

Provide funding for beach and waterway restoration and maintenance.

Fund studies to identify how best to diversify each local economy.

Invest in property and infrastructure to allow for diversification opportunities such as research and development and tourism expansion.

Offer GO-Zone-type incentives for coastal investments.

Implement charettes among key communities to get feedback on ideas and wants by the community.

Establish education center at Orange Beach.
Expand ecotourism.

Create opportunities for second cruise ship (parking deck, turning basin, links to beach condos).

Expand Convention Facilities, state park convention center, add mixed use to Mobile Convention Center.

Expand Sports and Entertainment Facilities (Regional Commission).

Combine county efforts for regional events.

Create nationally branded family entertainment opportunities.

Create new and improve existing stages for beach concerts.

Modernize Mobile Civic Center, including mixed-use additions.

Improve/expand/create South Alabama football facilities.

Assure safety of seafood, water, air, marine environment and market that assurance.

Create a regional tourism passport; enable seamless purchasing.

Expand Robert Trent Jones golf trail with new courses.

Create a Robert Trent Jones-like trail for recreational fishing.

Cross-market attractions.

Restore and maintain historic sites.

Explore the possibility of building a major aquarium.

Create an expanded turning basin for new, bigger cruise ships.

Promote ecotourism.

Expand sports complexes.

Consider opportunities for medical tourism.

Create a regional in-water show.

Improve existing and build new regional sports complexes (regional sports foundation) to accommodate Senior Bowl, Hoar Construction-GoDaddy Bowl, USA football.

Build on current festivals and establish new ones — Mardi Gras, Bayfest, Fishing Rodeo, Shrimp Fest, Arts & Crafts, Festival of Flowers, Christmas Trail.

Enhance local food economy with farmers markets, culinary arts education, local food in schools.

Promote local food production and processing (Capture over \$130 million in local food revenue currently being spent outside of our local area. These food expenditures have a multiplier of three when remaining in our local economy.)

Host local food seminars, conventions and events to benefit from national exposure and PR from being known as one of the few areas in the country that produces the food we consume.

Expand and promote concert series.

Capture both local and visitor perceptions: Ask “Who are we?” and “Are we who we think we are?”

Do internal audits from regional to local levels to define products and refine messages.

Develop a marketing plan — design for 2011 and beyond, connect messaging from region down to local levels.

Urge creation of an umbrella brand – develop a consortium of Chamber, CVB and other groups involved with destination marketing; build strategic alliances (airlines, AAA, etc.).

Reach out in a media/PR/advertising campaign, thinking local to international, determining key topics (i.e., food safety), using all media outlets.

Stage an Ambassador Program called “Frontline” to preach a common message of regional training on how to treat visitors.

Harden utilities – place underground and build in redundancy for quicker recovery/loss reduction and increased capacity.

Pursue compatible industrial/commercial/residential development.

Found wildlife/marine rehabilitation facility/attraction.

Establish a leadership team to tell/publicize our story (an organization/group to tell re-branding company what we want.) Heal the brand of the Gulf to restore consumer confidence in seafood safety with a research-based marketing campaign.

Assure the protection of key coastal recreational/tourism assets (shoreline restoration, beach reclamation and restoration; sustainable beach nourishment).

Get all waters open for fishing as soon as possible.

Improve disaster preparedness.

Maintain ongoing regional dialogue.

Small Business

Create a system of Business Support Centers which consolidate federal, state and local business-support programs into one location

Utilize universities to study each business sector to better understand needs and opportunities. This includes pre-disaster research and analysis to identify cross-sector interdependency and consequence analysis.

Establish Insurance Trust Fund.

Establish downtown Mobile university branch for Caribbean studies, maritime business, laws, etc.

Develop international airport to serve south Alabama, Florida Panhandle, south Mississippi.

Ensure the Gulf Coast Claims Facility is operational and responsive to local business needs.

Address bank appraisal requirements so that banks are not forced to reappraise properties in a temporarily depressed market.

Institute banking policies and regulatory practices which give businesses affected by the crisis the ability to refinance existing debt.

Institute policies which encourage investment capital in affected areas.

Secure a source of funding for local governments to replace lost tax revenue.

Secure a source of added emergency funding for critical public services such as mental-health counseling, business-support centers, social services, etc.

Support funding to realign municipal infrastructure such as highways and public transit.

Support programs that provide enhanced opportunities for small businesses in the state and the region to more effectively participate in the management of disasters by providing their products and services as means to improve self-reliance, to enhance overall disaster resiliency, and to accelerate business, industry and economic stabilization.

Encourage a personal emergency fund.

Create a tax structure that encourages small businesses to prepare for uncertainty.

Develop a small-business accounting network.

Improve ability to refinance debt.

Create preferred SBA lenders.

Support structure needed for mental health.

Encourage emergency teams of accountants, attorneys.

Establish banking disaster "roundtable," – getting all bankers on same page.

Found program to teach small-business owners to be financially literate.

Urge locally controlled claims process.

Ensure that local vendors have first choice of contracts from BP-type companies.

Develop Wellington, Florida-type community in Baldwin County that attracts tourism, but is not dependent on the beach.

Build the I-10 Bridge and make it spectacular with reasons for travelers to stop at the Mobile end, not just pass on through – follow the example of the Sydney Opera House or the Bilboa, Spain, museum – a building that could house a Southern Cultural Center or the like.

Expand the Fairhope Airport.

Establish Downtown university branch (Auburn, Alabama, Troy, USA) to focus on maritime studies, law, Gulf Coast environmental impact, etc, South American and Caribbean studies.

Fund smart growth plan.

Establish one central government for all of Mobile County so no duplication of services.

Set up local foundation to administer funds, including low-interest loans for qualifying developments (such as the North Carolina Research Triangle Park).

Grant relief to those struggling to pay utility bills.

Use local contractors to help rebuild, local restaurants to feed hired help, and other local businesses during recovery efforts.

Engage the FDIC in the recovery process.

Create locally administered disaster-relief loans and payment programs for existing loans (like those in Mississippi and Florida).

Implement a program to restructure debt.

Rework claims process so it is well-funded at the outset with locally influenced decisions.

Identify SBA lenders.

Teach financial literacy so that bankers and borrowers are in synch.

Create a Disaster Counseling Center to answer pressing financial questions.

Establish public relations emergency squads to act as lifelines, doing media outreach, PSAs and/or website content.

Recommend to businesses: Diversify your customer base (see Eureka Award Program).

Fully fund existing business incubators as well as create additional incubators in the area.

Establish philanthropic long term support foundation.

Create and fill a small-business cabinet post to advocate for small business.

Long-Range Economic Development

Build new I-10 Bridge over Mobile River.

Establish a fund for state and regional economic development groups to use for recruiting industries.

Review and document “lessons learned” from the Gulf oil crisis, including the study and development of policy that clearly defines the roles, responsibilities, authorities, as well as command-and-control structures including the various private and public sector stakeholders, at all levels, that need to work together effectively in the management of disasters.

Create a Disaster Management and Recovery Plan based upon knowledge and understanding of the Gulf oil crisis “lessons learned.”

Review and strengthen current regulations and oversight surrounding oil-rig operations.

Develop university-based evaluations of technological applications to meet catastrophic event fallout, i.e. oil-spill remediation, etc.

Develop university-based capability for rapid assessment of socio-economic and environmental impacts to inform and prioritize disaster-response and recovery efforts.

Initiate the City of Mobile Redevelopment Authority proposed in Mobile's New Plan (\$1 million for administration and marketing startup).

Set \$50 million into a revolving development fund to be used for implementing the New Plan for Mobile. This could provide needed seed and matching funds for grants and development financing. The numerous initiatives and projects articulated in the New Plan combine to form a transformative program for this city.

Fund a "Greenway System" of pedestrian and bike ways, improved and new parks, streetscape improvements.

Promote vibrant "gateway" developments.

Advance a medical technology campus.

Pursue robust neighborhood investment.

Seek transportation and access renewal.

Build New Water Street/Canal Street Interchange for I-10 and Wallace Tunnels.

Build Leclairment Pedestrian Bridge across Water Street and the CSX rail tracks to provide access to the riverfront venues.

Build "Waterfront Festival Center and Parking Facility" — to be located at the former CSX Terminal property and Cooper Park and integral with the Convention Center and the new maritime museum, linked with the Leclairment Pedestrian Bridge. Provides festive retail and entertainment with much needed parking and transportation linkages.

Assist completion of The Maritime Transportation Center and National Maritime Museum of the Gulf of Mexico.

Restore passenger rail service in Mobile.

Complete redevelopment of Fort Conde Village.

Relocate Mobile Regional Airport to Brookley.

Replace and relocate Ladd Stadium.

Insurance

Mitigation Recommendations

Establish a trust fund to provide incentives and financing for homeowners to take mitigation measures.

Commission a study of what hurricane models suggest that mandated mitigation discounts should be for homeowners in Alabama.

Require consumers, Realtors and builders to identify to potential home buyers all the wind-mitigation features on a home.

Evaluate whether to require admitted carriers to obtain proof of wind and flood coverage from consumers located in zones A and V.

Develop a nonprofit entity to utilize FEMA's Hazard Mitigation Grant Program (HMGP).

Strengthen local inspection programs for mitigation measures by developing sources of funding to increase the operating budgets of local building-code departments.

Encourage accurate mitigation inspections by requiring they be conducted by trained and licensed professionals.

Eliminate sales tax on materials used to retrofit homes against the effects of storms.

Educate consumers and other stakeholders about the potential insurance cost savings and return-on-investment that can come from fortifying and retrofitting their homes.

Building Standards Recommendations

Develop a strong statewide building code, or at minimum a strong, uniform code for local jurisdictions in Alabama's coastal counties to adopt.

Develop and implement a uniform process for localities to review construction plans and to inspect homes and buildings.

Work with stakeholders in the construction, sale, appraisal, and financing of homes and buildings to develop and implement stronger codes and a uniform review process.

Strengthen inspections and enforcement at the local level by developing sources of funding to increase the operating budgets of local building code departments.

Strengthen and develop programs to train and license local building-code officials to increase effectiveness of code enforcement throughout the coastal region.

Require insurance carriers to recognize industry-established Building Code Effectiveness Grading Standards (BCEGS) ratings and provide related discounts.

Develop and implement higher standards for freeboard levels for flooding, setbacks from water, and flood-proof requirements.

Adopt and implement more restrictive local land-use policies that recognize risks associated with structures in flood-prone areas.

Encourage code uniformity by establishing that changes to local building standards will be adopted uniformly by all of the jurisdictions in Baldwin and Mobile counties.

Publicize information about stronger building standards with consumers and other stakeholders.

Develop entities and resources needed to gather data on the quality of construction of homes and buildings in the coastal region.

Develop ongoing involvement and dialogue among stakeholders through a new Alabama Insurance Institute.

Transparency and Education Recommendations

Increase transparency by making both insurers' rate filings and their aggregate historical data public information. Require that insurers offering multi-peril policies show the separate premiums charged for wind and non-wind portions of policies on their declaration pages.

Require insurance companies provide consumers with a uniform disclosure form, or check list, showing what is included and not included in a residential policy.

Establish a new Alabama Insurance Institute by governor's executive decree to develop research, encourage dialogue and coordinate public education campaigns.

Market and Alternative Products Recommendations

Conduct a study on the concept of "recoupment," which would allow insurers participating in the wind pool to recoup potential assessments.

Conduct a study of premium tax revenues.

Conduct a study on the possibility of utilizing a captive insurance company to provide homeowners with short-term relief from the cost of insurance.

Encourage insurers to offer multi-year homeowners insurance policies to protect consumers against annual spikes in the cost of insurance.

Invite insurance companies to Alabama for an annual symposium to attract new carriers to the market.

Other Regulatory and Legislative Recommendations

Require licensing of contractors and subcontractors.

Enact an insurance fraud bill to protect consumers from unscrupulous agents and insurers and from consumers who defraud the insurance system.

Enact a reasonable statute of limitation for reporting property claims.

Enact and promote at the state level tax-free funds for individuals to help homeowners save for the cost of insurance deductibles and mitigation measures.

Encourage Alabama lawmakers in Washington, D.C., to reform the National Flood Insurance Program.

Encourage Alabama lawmakers in Washington, D.C., and Montgomery to find a resolution to wind and flood claim settlements and increase transparency.

Encourage Alabama lawmakers in Washington, D.C., to support and pursue a tax-deferred catastrophe reserve for insurance companies.

