

Coastal Update 2012

By Jim Blackburn

© January 2013

This newsletter originated almost twenty years ago as a report to supporters about various agreements reached between Formosa Plastics and me. It usually comes out during the end of the year/new year holidays. And it more recently has ended with a poem or two.

To start with, I'm happy to tell you that today, the Formosa Plastics facility in Point Comfort is very different than was the case prior to 1992. Their air and water emissions, worker safety and hazardous material handling improved significantly due to these agreements and their performance has remained quite good into the first decade of the 21st century.

During this Formosa battle and the implementation of subsequent agreements, I learned more about plant operations and the need to combine consideration of ecological, environmental and social issues than from any case experience before or since. When we were fighting, I remember being asked by a young construction worker why I was against construction jobs being provided at a time when jobs were hard to come by on the Texas coast. That stuck with me because I had not thought of myself this way, but instead as a protector of the people, of the coast. I also remember discovering that Formosa would actually make money if they undertook many of the supposedly more difficult innovations suggested by our studies. These experiences have led me to focus upon and attempt to understand the economic side of issues as well as the ecologic and human health effects side of things.

Recently, I made a presentation in Houston about efforts to preserve the coast and began discussing the fabulous ecological systems that we enjoy. However, rather than talking about my love for birds and fish and my spiritual connection with the Texas coast (which I truly feel), I discussed the dollar value of the natural system, and the ability of

private landowners to make money off of preserving nature. The interesting thing is that everyone in the room – including many business men and women – listened. I was not tuned out. I was heard, something that has not always been the case when I have spoken more personally about my connection with nature.

So in many ways, I have learned from this Formosa experience which has been expanded by my role at Rice University where I am director of the university-wide minor in energy and water sustainability. Sustainability requires the fusion of ecology, economics and social issues. If we in the environmental community can find ways to integrate economic and social thinking into our ecological and public health vision, we can become relevant to many more people. So in the spirit of exploration and creativity, this edition of the Texas coastal update is dedicated to attempts to combine these elements in pursuit of a sustainable Texas coast.

1. West Port Arthur

In 2006, I began representing Hilton Kelley and his group CIDA, Inc. in a fight for the long-term health and safety of residents living near the fence-line of refineries owned and operated by Motiva and Valero, as well as chemical plants owned and operated by Chevron-Phillips and Huntsman. The Texas coast is noted for economic achievement, but Port Arthur has been left behind. Portions of downtown are boarded up. Many residents have moved to mid-county, leaving behind a fence-line community that Hilton Kelley took under his wing when he moved back to his hometown around 2000 after a career spent in the Navy and on the West Coast.

During the early 2000s, flares were being improperly used by refineries and chemical plants and that practice drew the attention of Hilton. After cutting his teeth on the Texas Commission on Environmental Quality and an EPA that was unresponsive, Hilton began to understand the permitting process and asked us to help him oppose

several air permits that would allow the expansion of Motiva, making it the largest refinery in the United States at over 600,000 barrels per day. With the help of Eric Schaeffer of the Environmental Integrity Project, Neil Carmen of the Sierra Club and Denny Larson of the Refinery Reform Campaign, Hilton and I were able to reduce the air pollution from the new units to reasonable levels and obtain a new fence-line ambient air monitor as well as hand-held air monitors for citizen use.

Securing the air pollution reductions was an essential starting point for the negotiation of a “Community Enhancement Agreement” between Hilton and Motiva that went far beyond air pollution to become one of the most far reaching sustainability settlements in the United States. Among other things, Motiva created a community fund of \$2.0 million that would be supplemented by an additional \$1.5 million over a five-year period. A steering committee of local residents, including Hilton, was established to determine how to allocate this money within communities adjacent to the Motiva plant. Among the projects that have been funded by grants from this fund is a community development center constructed in the heart of West Port Arthur. This will primarily be a training and meeting facility, but its symbolic value goes far beyond its utility; it is a symbol that things – that business and government as usual – can be changed.



Self photograph of Hilton Kelley in front of the Westside Development Center constructed with funds from Motiva settlement.

After the Motiva agreement, Valero signed the “Sustainable Development and Community Cooperation Agreement” with CIDA and Hilton in 2007. This agreement has helped change West Port Arthur for the better by funding home repair, job training, nursing scholarships, youth outreach and medical assistance as well as supporting local karate and boxing programs for youth. A more general grant by Valero supported the development of a public television program filmed by CIDA that highlighted talent from West Port Arthur and generally presented a positive image of West Port Arthur. As a result of this program, a new pride began to emerge in West Port Arthur as a community.

Yet another agreement was reached by Hilton and CIDA, this time with the Total Refinery. This agreement funded job training for West Port Arthur youth at Lamar Institute of Technology, created a major grant for the Golden Triangle Empowerment Center and allowed CIDA to work with Susan Rogers from the University of Houston architecture

school to study and create an urban development design concept for West Port Arthur.

None of these breakthroughs would have occurred without the leadership and courage of Hilton Kelley, a man who returned to his community with the intent of changing it for the better. Although he is firm in his demands for clean air and transparency, he has shown the rest of the coast the way for industry and fence-line communities to work together. For his leadership in fighting for his community and signing these ground-breaking agreements of national significance, Hilton Kelley was one of six international grassroots heroes awarded the Goldman Environmental Prize. To be sure, major problems remain in West Port Arthur. But the actions of one person have made a difference. And along the way, the fence-line community has benefitted economically and showed the way for progress on environmental justice concerns nationwide.

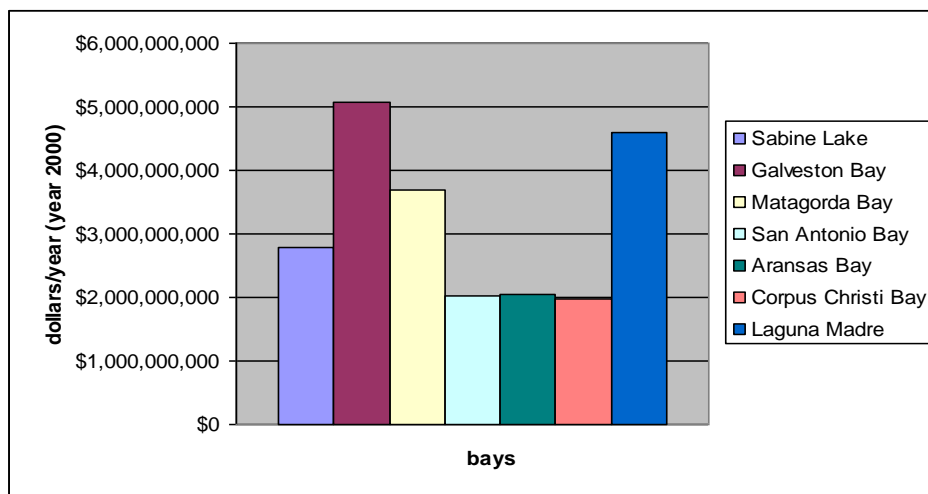
2. Whooping Cranes

Since 2010, my law firm - with the help of attorneys Jeff Mundy of Austin and David Kahne of Houston - has been in federal court in Corpus Christi litigating against the water management practices of the Texas Commission on Environmental Quality (TCEQ) that we believe were responsible for the deaths of 23 whooping cranes in the winter of 2008-2009. This case is pending before Judge Janis Jack of Corpus Christi who has promised a decision “soon”. This newsletter will be supplemented when her ruling comes out.

If we are successful in this litigation, we hope to be able to obtain additional surface water inflows from the San Antonio and Guadalupe Rivers to maintain the ecological balance and the economic viability of San Antonio and Aransas Bays. And yes – you read correctly. It is our belief that an ecologically healthy bay is an economically important bay.

We in Texas often talk about being concerned about economics but our actions undermine that assertion. If we were honest, I think we Texans would admit that the State of Texas is only concerned about those economic activities that are well represented in the political process. Freshwater inflow for our bays and estuaries is missing from the priority list of water uses, even though these inflows support both the recreational and commercial fisheries of the Texas coast as well as real estate sales up and down the coast. Our bays are diamonds in the rough. They are not simply water that floats boats. They are centers of marine production worth billions of dollars a year in service to us all, yet we do not value them.

Years ago Dr. Robert Costanza, an environmental economist, wrote an article in *Nature* with several co-authors. In this article, Dr. Costanza estimated the value of various ecosystems in terms of dollar productivity. In the *Book of Texas Bays* which I authored, I calculated the acreage of each major estuary and their associated marshes, swamps, submerged grass flats and tidal flats and multiplied that acreage times Dr. Costanza's estimate of annual dollar worth of these various ecosystems to all of us. The results, which can be seen in the figure below, are amazing. Collectively, our bays and their associated ecosystems are worth over \$20 billion per year, a strong number by any economic metric. It is also a value that can and will be lost if we do not provide for freshwater inflows.



I have had people tell me that those numbers are unrealistic, that no one would pay that amount for those bay services. As a response to these questions, I also calculated the dollar value in a different way. I reviewed computer modeling that was done for San Antonio Bay and made assumptions about water inflows being reduced by various water projects that have been and are being proposed along the Guadalupe River system. Based on the recurrence of drought cycles, the freshwater inflow reductions were critical in at least one year in four. San Antonio Bay annually produces about \$30 million from shrimping, \$17 million in oysters, \$1 million from crabbing and 500,000 recreational fishing hours worth \$6 million at \$12 per hour (a value that is very low for me personally), not to mention all of the supporting tackle, fuel and supply sales.

Based on bay modeling, I determined that San Antonio Bay productivity would be reduced by 40% once every four years which is very conservative. In this manner, about \$22 million would be lost every four years. Over the fifty year life of a water project, that loss amounts to almost \$300 million. As a point of reference, if Dr. Costanza's values were used, that loss would be more than \$6 billion over a 50 year life of a project. And that is solely for San Antonio Bay.

These numbers become extremely important as we consider the future of water supply in Texas. As we debate development of new water projects, the "full cost" of our water supply systems must be fully understood and documented and translated into dollars. In turn, these costs must be added to the cost of various water supply alternatives that cause this harm to the bay. In this manner, alternatives such as brackish desalination that may appear initially to be more expensive may not be if the "full cost" of water impoundment alternatives is taken into account. Without such accounting, we Texans are creating a false economy that will result in the loss of a dollar value that belongs to all of us - that belongs to you and to me.

We have had our public assets taken from us in the past. The TCEQ recently determined that the ecological viability of Nueces Bay has been destroyed by reductions in freshwater inflows due to water development and usage. This once viable estuary no longer produces the shrimp, crabs and oysters that it once did and no longer supports the levels of recreational use enjoyed in the past. Our state water management policies – or lack thereof – killed Nueces Bay. And these same policies – or lack thereof – will kill every other bay on the Texas coast over time if we don't act to protect these ecologic and economic resources.

Enter the whooping crane, a classic endangered species – a magnificent mega-fauna. Whooping cranes depend upon a healthy estuary because they eat crabs – about 80 crabs per crane per day – and crabs require freshwater inflows to create the estuarine conditions that they require to thrive. During the winter of 2008-2009, 23 whooping cranes died on the wintering grounds, more than had died during any prior winter. I believe that the testimony from the trial (which was held during December, 2011) established that a causal linkage existed between the water management policies of the TCEQ (or lack thereof), the subsequent reduction in inflows, the resulting increase in bay salinity that led to the decline of blue crabs and wolfberries that ultimately led to the death of 23 whooping cranes. It was a sad set of circumstances that will occur again and again if we fail to develop serious water management protocols that will ensure that we protect our bays and estuaries along with our other economically important activities.



Whooping crane with crab

One of the most interesting aspects of this case was the coalition that was formed to litigate this case against the TCEQ. A citizens group called The Aransas Project (TAP) was created to advocate for the cranes and the bays. The membership of TAP was extremely varied but they were united by their concern about the ecological and economic future of the areas surrounding Aransas National Wildlife Refuge. Groups as diverse as Aransas County, the City of Rockport, the Aransas County Democratic and Republican clubs, a fishing guides' association, various bird-watching organizations, commercial fishermen and national, state and local environmental groups joined together in a common cause – to litigate to protect the whooping cranes, and in the process, protect San Antonio and Aransas Bays and the economic future of local real estate, recreational and commercial fishing and eco-tourism.

So try to envision the whooping crane as an icon of both a healthy bay and a healthy coastal economy. That's what it is.

3. Houston Ship Channel Hartman Gate

In my work at Rice University, I have been conducting research at the SSPEED Center which I co-direct with Dr. Phil Bedient. The focus of this work is a bit different from my environmental law practice. In the work at Rice, I am searching for solutions to problems. I feel that we who are in favor of protecting natural resources often do not do a good job of offering alternative visions for the future – alternatives that propose methods to proceed in a better way. I have a chance to work in this affirmative way at Rice.

After Hurricane Ike, we received a grant from Houston Endowment to study “Lessons Learned from Hurricane Ike” and have been considering and evaluating both the realities of Ike and the risks that hurricanes pose to the upper Texas coast. As part of that work, we have evaluated many different structural and nonstructural alternative approaches to damage reduction and protection. One of those alternatives – the construction of a gate structure at the mouth of the Houston Ship Channel - has emerged as a key to the economic future of the City of Houston, Harris County and the region.

The Houston Ship Channel is home to several major refineries and over a hundred chemical plants of varying types. It is also relatively low-lying, and many of these facilities are vulnerable to hurricane surge flooding. The Channel industries dodged a bullet when Ike veered north at the last moment, coming ashore across Bolivar and Galveston Bay rather than at San Luis Pass as originally projected. If Ike had come ashore down the coast, the channel would have experienced the “dirty” side of the storm and seen a surge tide in excess of twenty feet. And Ike was not a “major” storm. It is certainly foreseeable that a reasonable worst case storm surge would reach upwards of 25 feet on the Houston Ship Channel.

A 25-foot surge up the Houston Ship Channel would be devastating. Dr. Hanadi Rifai at University of Houston has estimated that such a surge would flood almost 2800 product and hazardous material storage tanks. Flood waters and storage tanks do not mix well. During Katrina, Murphy Oil had a single oil storage tank lifted off its foundation with a major spill resulting. Just imagine several hundred tanks being picked up and their contents spilled into Galveston Bay as well as adjacent neighborhoods.



*Low-lying tank farms adjacent to the Houston Ship Channel.
Photo by Jim Olive.*

The environmental damage would be devastating, but would be rivaled if not exceeded by the economic harm from such flooding. The Ship Channel either directly or indirectly employs about 150,000 persons. It generates almost \$200 billion a year in economic activity and provides \$5 billion in taxes to local governments. The Invista Plant in Orange, Texas was shut down for months due to surge from Ike that flooded and destroyed pumps, compressors and other equipment

necessary to run a chemical plant. Such damage to the Channel would be a devastating blow to Houston's economy – one from which we might never recover.

That is the reality of major surge event in Galveston Bay – a ruined economy and a ruined bay. But it does not have to be that way. A potential solution exists that can be constructed with local funding with construction costs expected to be in the range of \$1 billion. Such a project does not require federal funding but only permitting by the Corps of Engineers. It is a major project, yet it can be underway in a few years. We don't have to rely on the federal government to solve this problem. We can do it ourselves.

The solution is to construct a gate structure in the vicinity of the Hartman Bridge over the Houston Ship Channel (state highway 146). Natural ground elevation of 25 feet or higher exists on either side of the Channel at this location. It is possible to create a gate structure and associated levee that would stop a 25 surge from coming up the channel yet maintain navigational access at most times. This is similar to the solution pursued by the Dutch at the Port of Rotterdam. In fact, several variations on the gate design exist. The important point is we can design such a structure with local engineers, and we can construct this gate with local bond proceeds.



Graphic depiction of possible location of Hartman Gate, with twenty-five foot contour shown by white line. Map prepared for SSPEED Center by Tom Colbert and Kevin Shanley.

There has been a lot of discussion about the so-called Ike Dike here on the coast. The Ike Dike is proposed to extend along the length of both Galveston Island and the Bolivar Peninsula. As part of this proposal, gate structures have been proposed across Bolivar Roads (which would cross the Houston Ship Channel near the Gulf), across San Luis Pass, and across the Gulf Intracoastal Waterway on either end of the Dike. This project will cost billions of dollars and almost certainly will require federal assistance which, in the aftermath of Sandy and the damage to New York and New Jersey, is unlikely to be available for decades if at all. And plus that, the Ike Dike is highly controversial and will likely be the subject of substantial opposition due to ecological and property rights concerns.

The Houston region cannot afford to wait for the Ike Dike to protect Houston's economy and Galveston Bay. We are living on borrowed time as it is. Ike almost nailed us. It is time to act definitively and firmly to protect our bay and our economy. If the decision is made to develop the Ike Dike at a later time, it and the Hartman Gate are compatible with one another because there will be residual surge behind the Ike Dike if it were ever constructed. A gate at the Hartman Bridge should be pursued ASAP.

4. Concluding Poems

In closing, I again offer a poem or two about my relationship with the Texas coast which is a spiritual sanctuary for me.

The Marbled Godwit

On Christmas Bay
With a group of kayakers
Experiencing the first cold front of the year.

The wind has blown away the water,
Leaving the kayaks to plow
Through mud with a water veneer,
The wind howling,
Turning the bay chocolate,
Rolling waves at me
That spray across my boat
And into my soul.

The shallow bar lies exposed,
Extending from the golden marsh,
Coated with emerald-green sea grass
That glistens in the winter sun,
Roamed by hordes of waders,
Claiming morsels, meeting needs.

Amidst the laughing gull with a pinfish
And the sanderlings chasing tiny crabs
The marbled godwits stand majestic,
Occasionally probing with long, elegant bills,
Displaying their biological uniqueness,
Making me grateful for their presence
In this place I call home,

A temple where I come
To reassemble self and spirit
Dislodged by the stress and turmoil
Of daily life.

With muscles aching and head clarified,
I leave the bay on this windswept day
Content. At peace. Satisfied.

The Black-Crowned Night Heron

It is late evening on Christmas Bay
On the longest day of the year.

As I paddle past the rookery,
The black crowned night herons
Become active,
Moving about shadow-like
Among the branches,
Anticipating another night of foraging
In the Spartina marsh
In the lights of the night sky
Beginning to emerge
As the sun leaves behind the dark.

Slow paddling and thinking -
Reflecting on the stars sending lumens
From millions of light years away,
Light that I see today,
Evidence of what was
A million light years ago,
Stars once alive, burning,
Stars that I believe I see
But yet may be no more.

The night heron flies overhead,
A darker shade of dark
Revealed before the flickering lights,
Reminding me of what is real,
That what I know is now.
That she and I are both here
In time and space -
That she and I are both alive.
And beyond that
On a good day like today
I need to know no more.

For those interested, I will be speaking about my spiritual relationship with the Texas coast and Earth church at the Rothko Chapel in Houston in early May, 2013. And I will post an update on the whooping crane litigation as soon as we hear from Judge Jack. Take care and do something good for the coast. Blackburn.