**Coastal Update 2011**

By Jim Blackburn

Happy holidays to all. This coastal newsletter is late this year because I have been in trial in Corpus Christi trying to get some water for San Antonio Bay and the whooping cranes. As many of you know, this newsletter started a long time ago as a public report on the opposition to Formosa Plastics. Since those days, it is my belief that Formosa has improved substantially as a coastal citizen, due at least in part to a series of agreements with me and others that set up audit processes, water reuse and recycle, and even sustainability evaluations overseen by a review group comprised of myself, Dr. Davis Ford and Randy Smith, the plant manager. These agreements were controversial, and this newsletter evolved to provide transparency on that work as well as to provide insights into other issues of interest along the Texas coast. Today, I just enjoy providing an oversight of issues concerning the bays and estuaries. I hope you enjoy this update as well as the poems that are now required reading at the end. Please send this to anyone you think would enjoy it.

**Whooping Crane Litigation**

Wow. I just finished a two week trial before Judge Janis Graham Jack in federal District Court in Corpus Christi, and I am still somewhat in a daze. It was the experience and event of a lifetime. I felt like I had been learning and practicing for thirty years for this case. I represent The Aransas Project (TAP), a non-profit group formed to protect San Antonio and Aransas Bays in an attempt to secure freshwater inflows for this important estuary. TAP filed suit against the Commissioners and the Executive Director of the Texas Commission on Environmental Quality (TCEQ) and the South Texas Watermaster for violating the federal Endangered Species Act. We alleged that the TCEQ allowed so much water to be removed from the San Antonio and Guadalupe Rivers that the bay salinity was changed beyond what the drought would cause, leading to less food supply for the Whooping Cranes, altering the drinking water supply of the whooping cranes and ultimately causing the death of 23 cranes during the winter of 2008-2009.

The trial lasted for about two weeks. It was a bench trial, meaning that there was no jury. Instead, the case was heard by Judge Jack. TAP put on 10 expert witnesses, five citizen witnesses and called two TCEQ employees as adverse witnesses. The TCEQ defendants were joined by interveners Guadalupe Blanco

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River Authority (GBRA), San Antonio River Authority (SARA) and Texas Chemical Council (TCC), with GBRA assuming a major role in the defense effort. Together the defendants called 11 expert witnesses. At the end of the trial, Judge Jack indicated that she wanted us to file written closing arguments and indicated that she may not issue a ruling before the end of summer. There are several hundreds of exhibits and thousands and thousands of pages of technical papers and documentation as well as hours of video tapes of crane feeding habits that she intends to review. It will take a while to do this information justice. The case was complex. We put on two types of evidence that linked Whooping Crane deaths to freshwater inflows. We put on statistical evidence linking freshwater inflows to whooper mortality, and we then put on a step-by-step chain of causation evidence that linked Whooping Crane mortality to poor food supply and needing to fly inland for fresh drinking water, rather than drinking brackish marsh water. Due to U.S. Department of Interior policy, neither side had been able to depose Tom Stehn, the now-retired Whooping Crane coordinator at the Aransas Refuge. On the first day of trial, Judge Jack authorized the issuance of a subpoena and Tom testified the next day regarding his methods for determining mortality of cranes on the refuge. Tom described to the court his careful and thorough methodology for his aerial census to determine peak flock size, and to detect individual crane mortalities. His testimony effectively refuted any allegations that the 23 dead cranes simply were “missing”. We also linked estuary salinity to blue crab and wolfberry abundance and then linked bay salinity to the inflow and water withdrawal patterns authorized by TCEQ. We put on evidence that the TCEQ had authority to address these overuse issues if they wished; we put on evidence that the Senate Bill 3 process was not working; and we offered answers in the form of remedies that involve creating a balance between the economic requirements of the basin and the inflow needs of the bay and the birds. We rested after four and half days.

For their part, the TCEQ primarily put on evidence that they did not have authority to manage or control existing water use permits. According to the TCEQ, existing water use permits are exempt from the Senate Bill 3 process (we agree) and these existing permits cannot be altered under current authority (we disagree). TCEQ did not offer any technical experts, choosing instead to rely upon GBRA and SARA to present the scientific evidence. GBRA’s case challenged the death of the 23 birds and Tom Stehn’s counting methods, and also asserted that Whooping Cranes are omnivores and eat other food items when crabs and wolfberries are in short supply due to drought and water use. They also put forward an expert in the review of crane carcasses (a so-called necropsy), arguing other causes of death

 (although emaciation was noted in the necropsy reports), and they put forward an expert with an energetics model to explain how the cranes could find sufficient energy with different diets (but with no offer of proof that the food was actually available on the refuge). They also put on an economist who assumed that if TAP won, all of the water in the river system would then be dedicated to freshwater inflows, shutting down numerous existing businesses and causing significant economic harm to the region. This last witness did not even pretend to analyze the remedy that TAP was seeking (e.g., something akin to the Edwards Aquifer process), choosing instead to make the most incredible assumption possible, leading to a conclusion of economic ruin to the region. I was not impressed.

I feel very good about our case and our evidence. I think our witnesses were excellent across the board. I want to personally thank Dr. George Archibald of the International Crane Foundation, Dr. Ron Sass of the Baker Institute at Rice University, Dr. Kathy Ensor, Chair of the Rice U. Department of Statistics, Dr. Felipe Chavez-Ramirez of the Gulf Coast Bird Observatory, Tom Stehn, recently retired from the U.S. Fish and Wildlife Service (by subpoena), Dr. Paul Montagna of the Harte Research Institute at Texas A&M - Corpus Christi, Joe Trungale, P.E., of Trungale Engineering & Science, former TCEQ Commissioner Larry Soward, former Executive Director of Texas Parks and Wildlife Andy Sansom (now with the River Institute in San Marcos) and Dave Frederick, retired U.S. Fish and Wildlife Service Habitat Conservation Plan expert. These experts were willing to put themselves on the line for the bay and for the whoopers. I and all crane supporters are indebted to them all.

We also had a number of citizen witnesses including County Judge Burt Mills of Aransas County, Deborah Corpora of the Aransas Bird and Nature Club, master naturalist and former Wharf Cat guide Ray Kirkwood, Al Johnson of the Crane House and Dr. Ron Outen of The Aransas Project; each of them testified as to their concern for the bay and the birds and the uses that they made of the bay. These were “standing” witnesses – the bird watchers and bay users that, as TAP members, provided us with the ability to come into court and attempt to protect the cranes. They were also brave souls who stood up for the bay and the whoopers. And let me add that I have never had a more diverse or impassioned group of coastal advocates than the members of TAP. TAP has over 30 environmental groups and businesses as members, including national, statewide and local environmental NGOs as well as Aransas County and the City of Rockport and both the Republican and Democratic Clubs of Aransas County. I’m really proud of that across-the-political-spectrum support.

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I would be remiss if I did not acknowledge the support of members of the D. M. O’Connor ranching family of the Victoria/Refugio area. They have contributed to this cause both in spirit and resources. Without their generous commitment, none of this could have happened. Our legal team was assembled from both our office and partially-paid volunteer lawyers who made great contributions. I particularly want to thank Jeff Mundy, a past President of Houston Audubon and an excellent trial lawyer, for joining our team as well as David Kahne, a Houston federal court practitioner and excellent strategist. I particularly want to recognize Charles Irvine of our office who was our resident expert on both the law and the expert science case. Mary Conner of our office wrote our briefs and Patrick Waites, another outside lawyer, was our documentarian. I also want to thank the team at Milkshake Media, including Katherine Jones, and Shannon Ratcliffe, who did a great job from the beginning to ensure TAP’s message got out there.

What was clear to me in this trial is that the Texas administrative law process, the regional water planning process and the Senate Bill 3 processes are all stacked against the bays. It was such a relief to get before an impartial federal judge and be able to be heard. There are times when, as a lawyer, I have questioned the justice system. This experience renewed my faith. I don’t know if we will win or lose. I do know that we got a fair hearing. The issues before the Judge are extremely difficult. The stakes are high, especially as we find ourselves today in the midst of another severe drought. But I rest much easier at night knowing that I did my best to try and protect something truly important. There is no price on the whooping crane. There is no price on being able to take a young boy or girl to the bay and catch a fish or see a shrimp jump out of the water or catch a crab or see a beautiful pink bird gliding across a coastal flat in the early morning sun. Some things are simply priceless.

Please check out the TAP website at <http://thearansasproject.org/>.

**Protecting The Galveston Bay Region From Storm Surge**

Over two years ago, the Houston Endowment awarded a grant to the SSPEED Center at Rice University to study Hurricane Ike – what we learned (or should have learned) from Ike and what could be done in the future to better protect our region from storm surge. Although much of the Bolivar Peninsula and the City of

Galveston were destroyed by Ike, much of the region was spared. Ike came inland to the east of the Clear Lake area, with the dirty side of the storm missing the greater Houston area. Even so, the damage was over $30 billion and over a hundred lives were lost. If Ike had hit near San Luis Pass, the damage could easily have exceeded $100 billion and thousands of lives could have been lost. Ike was a huge disaster, but it could have been much worse. I am co-principal investigator of the work at SSPEED Center along with Dr. Phil Bedient. We have assembled an excellent team of professionals that include Kevin Shanley of SWA Architects, Tom Colbert of the University of Houston Architecture School, Dr. Hanadi Rifai of the U. of H. Department of Civil Engineering, Dr. Jamie Padgett of Civil Engineering at Rice, Dr. Clint Dawson from the University of Texas Austin Institute for Computational Engineering, Dr. John Anderson of the Rice Earth Sciences Department, Dr. Carol Lewis of Texas Southern University and Dr. Ron Sass of the Baker Institute at Rice, among others. Together, along with my co-chair Elizabeth Winston Jones of the Green Think Tank at Houston Wilderness, we have developed a conceptual plan for protecting the region and offering a view of a sustainable future.

Our work followed the destruction of Ike and the proposal of a massive coastal dike and levee system called the Ike Dike. The Ike Dike was initially proposed to extend from south of San Luis Pass northward along Galveston Island, crossing Bolivar Roads and the Houston Ship Channel and extending the length of Bolivar to High Island. This massive project generated concern about extreme cost – especially in the wake of the 2008 economic collapse – as well as concern about environmental damage to the coastal ecosystem. Rather than focusing on a single massive project with a “one size fits all” approach, our work at SSPEED Center focused on developing a plan that could be designed, funded and implemented in separate component pieces. We approached this project from the viewpoint that huge sums of federal money are unlikely to be available for a single massive structural project and that the best chance for flood protection for the region was to integrate structural and non-structural solutions into an overall plan that could be funded by multiple federal, state, local and private sources.

As a result of this focus, the SSPEED Center developed a plan that had four key components. Separate structural and non-structural solutions were proposed for the Houston Ship Channel, the upper west side of Galveston Bay, the City of Galveston and the lower lying coastal wetlands and adjacent prairie. Together, we think these alternatives have a chance of being implemented and helping the region become more resilient in the face of inevitable future storms.

One component of the plan is to protect the Houston Ship Channel. If a major surge event were to come up the channel, the potential economic and environmental damage would be immense. Dr. Dawson has modeled reasonably expected storm surges to approach 25 feet in the ship channel. For comparison, the FEMA 100 year flood elevation in key areas is about 11 to 13 feet, clearly not sufficient to protect against storm surge. Here, we are suggesting that a gate structure be considered to close off the Houston Ship Channel beneath the Hartman Bridge. It is not clear to us why this idea has not been previously proposed. There are relatively high elevations adjacent to the channel on either side here (elevation 25 feet) and a relatively short levee system could be constructed to the edge of the channel, which could be protected with a gate similar to that used in Rotterdam. This alternative would not only protect the channel industries but would also protect areas of the City of Houston’s lower lying east side, offering environmental justice benefits to a relatively poor community that is often flooded.

Another key area is the upper west side of Galveston Bay. People continue to move into this hurricane evacuation zone without legal notice or warning of the risk of hurricane surge. Current estimates are that only about one million people can be safely evacuated from the evacuation zone in Harris, Galveston and Brazoria Counties in the 36 hours before landfall, yet estimated population growth in this evacuation area is projected to exceed 2 million by 2035. It seems crazy that we continue to bring people into this high risk zone without telling them what the risk is. Flood plain maps show much of this area to be free from flood risk although much of the area east of IH-45 would be inundated by a major surge event. In this area, the SSPEED Center is developing a flood warning system, and we are looking at elevating SH 146 to provide a barrier to storm surge coming in from the bay. Of all of the areas we have studied, this may prove to be the most difficult to protect and the most dangerous to human safety and life.

The City of Galveston was substantially damaged by Ike, but not from the front side. Instead, the flooding came into the unprotected backside of the City, causing extensive damage. Here, the potential solution is to integrate a backside levee system around the developed core of the City, attempting to impede the flow of water. This is an extremely sensitive design issue, with significant historic and environmentally sensitive areas throughout, but it is certainly worth further attention.

The fourth part of the plan may be the most exciting to coastal outdoor enthusiasts. Much of the lower lying areas of the coast, particularly in Chambers and Jefferson

Counties, were inundated by literally billions of gallons of storm water. This land held this water and then released it back to the Gulf, with overland backflow lasting for days after Ike’s passage. These low lying areas are a natural flood mitigation resource. They have value for flood storage in their natural state. They also have recreational and economic development value that has largely been unrecognized and underutilized in our region. To this end, the SSPEED Center proposed that our region work toward a national recreation area designation along the upper Texas coast to take advantage of the natural bounty of these low lying lands for bird watching, kayaking, crabbing and fishing as well as for their natural flood absorption benefit.

This idea is being championed by local businessman John Nau and Secretary James Baker who have established a Steering Committee to work toward achieving that goal. This Steering Committee, along with a Partner’s Committee, will work to achieve a National Recreation Area designation for a 130 mile swath of the coast extending from Matagorda to High Island. Only willing landowner participants will be included, and no additional regulations will be imposed on anyone outside of the willing signatories. It is a win/win that could generate billions in additional economic development that exploits our natural bounty in a non-destructive manner. This is what economists have been describing as natural capital, and it is our goal at the SSPEED Center to put this to work for all of us.

An overview of the SSPEED Center concept is shown on the attached diagram. In addition to the projects discussed above, the existing Texas City and Freeport levees are shown. The important point is that we need to work together to propose and implement quality solutions. It is not enough that we love the coast. We have to become proactive and get out there and cause good solutions to be implemented - solutions that work on an economic, environmental and social level. We sometimes lose because we do not have an acceptable alternative solution. Hopefully we are ahead of the curve in the Galveston Bay region. And to this end, the Houston Endowment awarded the SSPEED Center funding for three more years to more fully develop these concepts and to seek and obtain public input on them, and to evaluate them relative to economic, ecological and social considerations.

Please check out the SSPEED Center website at http://sspeed.rice.edu/sspeed/ and Houston Wilderness at http://houstonwilderness.org/index.php/NationalRecreationArea.

**Rethinking Texas Law of Surface Water**

Fresh off the whooping crane litigation, I want to engage in a rambling discourse about Texas water law, an archaic system that must be changed if we are to ever save our bays and estuaries. Texas water law and practice killed Nueces Bay. Of that there is no doubt. Nueces Bay at one time was a flourishing estuary. It is now officially classified by the Bay and Basin Expert Science Team (BBEST) formed under SB 3, as unsound due to inflow alteration, whereas every other estuary on the coast is still considered to be ecologically sound. We have proven that we can kill an estuary. Now is the time to start saving some.

Texas surface water is owned by the State of Texas. Use of state water is authorized by Certificates of Adjudication and permits and by statutory exemption. Although we the people own the water, we don’t act like it. We as citizens need to

become as concerned about the protection of our public property as we are about protection of private property.

These water use permits can be bought and sold although it is not clear what the property interest is that is being conveyed. Rather than a pure property right, these permits establish a usufructory right, or right to use. However, most permits allow the State to intervene and alter the right, and there are numerous statutes on the books that give the state water agency, the Texas Commission on Environmental Quality (TCEQ), the right to impose limitations on behalf of the public welfare, which is undefined, or in the case of emergencies, which are also undefined. The problem is – our TCEQ Commissioners are not looking after our public property. They are failing as stewards.

Our estuaries are in danger of being killed because they have no water rights. In the past, water was considered wasted when it flowed into the bay. In those days, little was known about the role of freshwater in creating the estuary and maintaining the highest levels of ecological productivity known to exist. Freshwater inflows moderate the salinity and bring in the nutrients necessary to fuel the lower levels of the food chain (the phytoplankton that feeds the entire web of life) and helps provide the nursery conditions that nurture most species that we know and use, including redfish, shrimp. oysters, crabs, flounder and countless more species. Unless and until the bays get water rights, their future will not be secure.

There are many steps that the TCEQ could take if there was any political will to act on behalf of our bays and estuaries. First, they could adopt science-based goals for freshwater inflows. Although the SB3 process cannot reach existing permits, it can have an effect on future permits. Here there is an important role for science, and the SB3 process requires the development of science-based goals for the bays and estuaries in the BBEST process. However, the sound science recommendations were not followed in either the Galveston Bay or Sabine Lake systems. Instead, the TCEQ opted to infuse economic and political concerns to dilute the amount of freshwater needed for our bays, leading to the adoption of inflow numbers that are not reliable to protect the se bays. This should not be accepted. If you care about the bays, you need to let your politicians know that the bays need water and need it now.

There are also key changes that could be made. Water rights that have not been utilized could be canceled and put into the Texas Water Trust for the bays. Contracts for sale could be put on hold by the TCEQ, thereby limiting transfers. Action could be taken to insure return flows are in fact returned to the rivers. Drought management plans could be required much earlier in time and with more restrictive requirements. Industrial users could be required to analyze the potential for water use reduction through recycling and reuse much like was done at Formosa Plastics years ago.

These and many more alternatives exist. The first bay water rights were recently issued for Galveston Bay when the City of Houston agreed to ensure that 300,000 acre feet of return flows would be returned to Galveston Bay. A recent permit issued to the Lower Colorado River Authority included a salinity trigger in Matagorda Bay whereby more water was provided to the bay when salinities exceeded 25 parts per thousand. So, there is some precedent and some hope.

My favorite economist Herman Daly talks about the difficulty of transitioning from the empty world to the full world. We are living today in a full world, one that is full of people and people’s impacts. We are placing too many straws in limited watercourses. We are sucking our rivers dry and turning our bays to salt. Texas water law is a relic of the empty world. It is time for us Texans to recognize that we live in the full world and need a full world legal system that will ensure that aspects of Texas that we love, like the coastal bays and estuaries, will continue to thrive into our full world future.

**Poems**

Now comes the fun part. My poetry is a part of me. I find it much easier to express certain ideas and certain concepts through poetry than through prose. I hope you enjoy these selections.

**The Loon and The Caracara**

Walking toward federal district court

Along the seawall in Corpus Christi

On the first day of the whooping crane trial,

Jeff Mundy beside me

His federal rules everpresent.

The loon fishes in the calm morning sea

Diving and staying down for seeming minutes,

Only to bob up and show the white bib

That flashes to our anxious eyes

Where it is seen by Jeff

Who quickly whispers that luck will be ours today,

The loon sending vibes that the cranes are hopeful

Of our success.

How can we lose when the loon wishes us well,

When the caracara meets me on my drive south

And tips its wings to note my passing,

Asking how well prepared are we

Who dare to bring the State of Texas to task?

Promising that all of the bird world

Will be with us,

Wishing us well,

Sending greetings and love and hope for the future.

**The Whooping Crane**

The large white birds

Stalk the Aransas marsh pond

Showing the awkward cinnamon child

How to stab the fleet and nimble crab.

Who would think the lovely swimmer blue crabs

Could carry the magnificent -

The elegant – the endangered - whooping cranes

Through Aransas winter and back again

To Buffalo Woods in faraway lands

Where they try to add a few cranes more;

Blue crabs that depend upon

The freshening flow of the Guadalupe River,

A river needed to sweeten San Antonio Bay,

A river drained by Texas commerce,

A river lessened by mismanagement,

A river sucked dry by good ole Texas greed.

I return to Aransas year after year

To see the pair with the orange-streaked kid,

To watch a drama of our modern age

Played out for real.

And I smile as the young one stabs –

And stabs –

And yet again stabs

After the fleeing, nimble crab.

And at night alone with my fanciful dreams

I dance the dance of the mating cranes

And sing the melodious haunting chants

To whomever or whatever hears such rants

And I ask that there will once again be

Blue crabs to stab when they return to me.

**The Coot**

In the Sacahuista sloughs

On the Texas coastal prairie

East of 281 near Encino.

The coots dot the surface

Of a flooded grass meadow–

Sparkling green shoots of cellulose

Embraced by sweet blue water

That flows ever so slowly

East toward the Laguna Madre.

Watching the black duck-like birds

With the white slash across their faces,

It becomes clear why men of the age

Of me and my friends

Are called “old coots”.

As we drive up, the coots run

Across the water surface

Not quite able to get airborne-

Vacillating between flying and lighting.

And when their footsteps

No longer crease the smooth flat surface,

They just chug along –

Not fast, not hurried,

Just grazing and gazing.

But most of all

They murmer to each other non-stop,

As if talking under their breath,

Commenting upon the way of the day,

Commenting on the newest issue to pass before

Their collected wisdom,

Offering comments and quips,

Basking in friendships formed long ago.

Old coots living through another good day.

I hope that you have an excellent 2012 and that you will vow to do something positive for the Texas coast in this coming year.

 Blackburn