



NFWF

Powderhorn Ranch

Conserving Gulf Coast habitat on a landscape scale

GULF ENVIRONMENTAL BENEFIT FUND

In the wake of the 2010 Deep-water Horizon explosion and oil spill in the Gulf of Mexico, BP Exploration and Production, Inc. and Transocean Deepwater, Inc. each pled guilty to certain criminal violations of federal law. The plea agreements in those cases require BP and Transocean, among other things, to make certain monetary payments to NFWF that are designated to fund projects benefitting Gulf Coast natural resources injured as a result of the spill. NFWF has established the Gulf Environmental Benefit Fund to receive and administer these funds.



Salt marsh at the Powderhorn Ranch. | Credit: Earl Nottingham, Texas Parks and Wildlife Department

CALHOUN COUNTY, TEXAS GULF COAST —

Even on a moonless night, you could tell the Powderhorn Ranch teemed with wildlife. Every few minutes, telltale sounds punctuated the darkness – mullet splashing out in Matagorda Bay, coyotes wailing, spooked white-tailed deer snorting. A flashlight beam jutting through the fog reflected eyes at almost every turn, some small and close to the ground, others large and staring back at you through the brush.

But it was only later, as dawn broke, that you could truly appreciate the abundance of wildlife at this 17,351-acre spread on the Texas coast.

The clear shallows off the marshy shoreline practically boiled with mullet and shrimp. Spotted tail fins broke the surface as schools of red drum chased bait fish and nosed around for crabs. As egrets high-stepped through the shallows, the day's first squadrons of brown pelicans began patrolling just offshore. By the time the sun broke the horizon, across the bay and far out over the Gulf of Mexico, at least



An endangered whooping crane at Aransas National Wildlife Refuge.

| Credit: Paul Wolf, iStock



A red drum's tail fin breaks the surface at the Powderhorn Ranch.

| Credit: Matt Winter, NFWF



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The National Fish and Wildlife Foundation (NFWF) protects and restores our nation's fish and wildlife and their habitats. Created by Congress in 1984, NFWF directs public conservation dollars to the most pressing environmental needs and matches those investments with private funds. Learn more at www.nfwf.org

a dozen of the iconic birds were hard at work, dive-bombing pods of menhaden balled up less than 100 yards out.

An early-morning driving tour led by Carter Smith, executive director of the Texas Parks and Wildlife Department (TPWD), generated even more wildlife sightings. A crested caracara took off from atop a gnarled live oak at the edge of a native tallgrass prairie. Along the banks of Powderhorn Lake, fiddler crabs skittered through the marsh grass while an osprey carried a catch high overhead. At one of the ranch's many isolated freshwater pothole ponds, a massive whitetail buck bolted from cover and bounded away just a few yards from the tour group.

By the tour's end, it was easy to see what why the successful effort to purchase and permanently protect the enormous ranch now serves as a model for Gulf of Mexico recovery efforts following the 2010 Deepwater Horizon oil spill.

"We've had our sights set on Powderhorn for decades," Smith said during a stop on the tour. "It's one of those last fabled ranches on the coast, and one of Mother Nature's finest creations, as far as I'm concerned."

TIME TO THINK BIG

In the wake of the disastrous 2010 oil spill, conservation forces across the Gulf Coast already have begun tapping into enormous recovery funds to leverage once-in-a-lifetime conservation opportunities to protect, enhance and sustain some of the nation's most important coastal ecosystems.

"The Deepwater tragedy was just that – a tragedy – and we would have never wanted to see that happen," Smith said. "But it's also presented an opportunity. ... You can be more far-sighted, take some risks and realize some dreams you never otherwise would."

In 2013, a U.S. District Court approved two plea agreements resolving certain criminal charges against BP and Transocean that arose from the Deepwater Horizon spill. The agreements directed a total of \$2.544 billion to the Gulf Environmental Benefit Fund, administered by the National Fish and Wildlife Foundation (NFWF), for projects benefiting the natural resources of the Gulf Coast that were impacted by the spill.

Nearly \$1.3 billion will be received for barrier island and river diversion projects in Louisiana, along with \$356 million each for natural resource projects in Alabama, Florida, and Mississippi, and \$203 million for similar projects in Texas. NFWF is actively working with leaders of state and federal agencies to direct available funding to significant conservation projects.

In Texas, Smith said, "Powderhorn topped everyone's list." Conservation organizations there had long recognized the



Brown pelicans look for fish at Aransas National Wildlife Refuge, near the Powderhorn Ranch. | Credit: Rosemary Bush, iStock



Carter Smith (above, left), executive director of the Texas Parks and Wildlife Department (TPWD), leads a tour of the ranch during a stop along the banks of Powderhorn Lake. | Credit: Matt Winter, NFWF

ecological importance of such a large tract of land containing such a diverse array of coastal habitats. But mustering the resources to actually buy and conserve a property of that size had proved impossible.

In 2014, Smith’s organization and its partners – including the Texas Parks and Wildlife Foundation, The Nature Conservancy and The Conservation Fund – approached NFWF with an idea to use this new funding to complete a stunning conservation achievement and the largest conservation land purchase in Texas history: the acquisition of the Powderhorn Ranch.

The sprawling property and its ecological treasures now add to a mosaic of protected coastal lands between Galveston and Corpus Christi that includes the adjacent Aransas National Wildlife Refuge and Matagorda Island Wildlife Management Area.

Through the Gulf Environmental Benefit Fund, NFWF is providing \$34.5 million over three years for conservation of the ranch, which eventually will be operated as a state park and wildlife management area. The Texas Parks and Wildlife Foundation has committed to raise matching funds to complete the \$50 million project, which includes habitat restoration and a long-term stewardship endowment. Through the Acres for America program, NFWF and Walmart are helping the foundation meet its goal with an additional \$500,000 grant.

To many involved in the Gulf restoration effort, the Powderhorn project exemplifies a near-perfect mix of scale, diverse benefits and long-lasting conservation outcomes. Instead of funding smaller projects spread out along the coast – a salt marsh restoration here, oyster reef project there – state officials and conservation forces in Texas are looking to strategically use the funding to support a landscape-scale conservation measure that protects an entire suite of coastal habitats at once, along with the delicate interplay between them.

“Within its confines, you get all the representative habitats and communities, both plant and animal, which reflect the entirety of that coastal landscape,” Carter said. “In smaller, fragmented, isolated parcels, you don’t see that.

“It’s a lot harder to put Humpty Dumpty back together, so with properties of this scale and in this conservation context, it’s a lot easier to realize the conservation objectives that we all have.”

ECOLOGICAL SIGNIFICANCE OF SCALE

Back at the ranch, Ted Hollingsworth, land conservation director for TPWD, stood by the banks of Matagorda Bay and used a large map of the property to explain how natural forces could create and sustain the many habitats found along this stretch of the Texas coast.



Deer forage under a live oak at the Powderhorn Ranch. | Credit: Matt Winter, NFWF



A roseate spoonbill flaps its wings while surrounded by northern pintail ducks on South Padre Island. Large barrier islands in this area of the Texas coast contain vital habitats for migrating waterfowl, shorebirds and songbirds. | Credit: Bob Balestri, iStock

“This is where 98 percent of the endangered whooping cranes come for the winter, and it’s because of this unique geology,” Hollingsworth said. “They like crabs, which require tidal waters. They like wolfberries, which is a little shrubby plant that grows on the edge of these wind flats. And they need freshwater. All of these things have to come together in one place.”

Over thousands of years, he explained, the land on these large barrier islands has been built up and scoured out by storms, droughts, winds and currents. The resulting landscape is dotted with sand mounds and pockmarked with small depressions that hold precious freshwater.

“The limiting wildlife factor for a lot of big ranches out here, really, is freshwater. There’s vegetation, there’s elbow room, but there’s just not the freshwater. We’re going to see that become increasingly important as more and more of these big properties become fragmented.”

The dozens of pothole wetlands scattered around Powderhorn don’t just provide drinking water for wildlife – they also serve an unseen but vital purpose. The freshwater drains out along an impervious layer of clay underneath the sandy topsoil, keeping surrounding soils hydrated, Hollingsworth said.

“You always have freshwater slowly, gently leaching out into this system,” he said. “It also keeps Powderhorn Lake and these marshes from ever getting hypersaline, which is critical to maintaining the system.”

This slow drip from Powderhorn’s potholes also sustains the ranch’s mature live oak forests, which ring much of the property’s shoreline along the Gulf of Mexico and Matagorda Bay. These maritime forests serve as a beacon for untold millions of songbirds migrating north across the Gulf of Mexico from Central and South America.

“This is an amazing fallout area for the birds,” Hollingsworth said. “A lot of them really don’t like to land in low brush like you’d find on some barrier islands. They wait until they find tree canopy to fall out into – and this is it.

“We were here in April, and it was the most amazing thing I’ve seen. ... I’ve never seen a tree with 40 Baltimore orioles in it, and in the next tree, 40 blue grosbeaks. It was just unforgettable.”

BUILT TO LAST

The same natural forces that provided Powderhorn with so many reservoirs of freshwater also endowed the landscape with long-term ecological significance. A central sand ridge running across the ranch rises to about 16 feet in elevation, giving the landscape a unique resilience to potential



Some of the habitats found at the Powderhorn Ranch include (from top) freshwater pothole ponds, mature live oak forests, native tallgrass prairies, and salt marshes. The ranch also encompasses tidal bayous, brackish emergent marshes and algal flats. | Credit: Matt Winter, NFWF

sea-level rise.

“By the year 2100, we’re probably going to see a meter of sea level rise,” Hollingsworth said. “Some of these sites along the coast that are just spectacular, these tidal marshes, are going to be under water.”

But Powderhorn’s brackish marshes, tidal bayous and low spartina prairies are expected to slowly migrate up the ranch’s gently sloping topography, keeping pace with the rising sea.

Protecting Powderhorn now, in its entirety, ensures that “we’re going to continue to have that full spectrum of coastal habitat, continue to have habitat for whooping cranes and numerous other species well into the future,” Hollingsworth said.

Smith agreed, noting that models and forecasts of potential sea level rise can help guide conservation investments. Powderhorn, he said, holds up well in those scenarios.

“Making sure that places are in conservation where we’re going to continue to have those tidal marshes, this is going to be very important,” Smith said. “Forty years ago, people were just looking at the quality of the habitat and the quality of the resources out here and saying, ‘This is too priceless not to conserve.’”

Resilience to sea level rise, Smith said, is “icing on the cake.”

FOR PEOPLE, TOO

The Powderhorn acquisition doesn’t just ensure the survival of vital habitats and wildlife. The conservation of those 17,351 acres also promises to provide hundreds of thousands of Texans with an increasingly rare opportunity to experience a still-wild place.

Smith said that once habitat restoration projects and other work have been completed, the ranch will open up for limited public use. Though details of public access plan haven’t been announced yet, Smith said options could include managed hunting and fishing, canoing and kayaking, birding and primitive camping.

“We’ve got 11 miles of tidal frontage here,” Smith said. “The water is clear, shallow and just teeming with mullet, shrimp, red drum, speckled seatrout and flounder.

“This is just a vastly different experience than you’d find on Galveston Island, Mustang Island, the Padre Island National Seashore. This gives people the chance to enjoy a special part of the coast that otherwise they’d never have a chance to.” 



More scenes from a tour of Powderhorn Ranch.
| Credit: Matt Winter, NFWF