

POWDERHORN RANCH FACTS

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LOCATION

Powderhorn Ranch is located on the Texas coast in Calhoun County immediately northwest of Port O'Connor, 75 miles northeast of Corpus Christi, 110 miles southwest of Houston and 130 miles southeast of San Antonio. The ranch boasts more than 11 miles of tidal bay front on Matagorda Bay, the second largest bay in the Gulf of Mexico.

GEOGRAPHY

The ranch is roughly square in shape, with 3.7 miles of frontage on FM 1289, 4.4 miles frontage on SH 185, 4.0 miles frontage on Live Oak Bayou, 5.5 miles frontage on Matagorda Bay, and 5.9 miles frontage on the shoreline of Powderhorn Lake, a tidally influenced, secondary bay off Matagorda Bay. These roads and water bodies comprise the boundaries of the 17,351-acre ranch. Elevation ranges from sea level to approximately +15 feet along a ridge that runs roughly through the center of the ranch from northeast to southwest. This ridge is important to mitigating the impact of tropical storm surges on inland habitats and communities, including marshes along Powderhorn Lake and the historic township of Indianola.

NATURAL FEATURES

Powderhorn Ranch is remarkably diverse with a wide range of intact aquatic habitats; from thousands of acres of freshwater wetlands, to salt marshes and tidal flats to miles of coastal shoreline, extensive forests of mature coastal live oak, and a low level of agricultural and other anthropogenic disturbances. The property preserves a large and relatively intact example of the Ingleside barrier-strandplain geologic system and ecological community, a unique Pleistocene coastal system limited in geographic range to a narrow band stretching from Calhoun County through Aransas, Refugio, San Patricio and Nueces Counties to northern Kleberg County. Outside Powderhorn Ranch, much of this system has been heavily altered through residential,

commercial and agricultural development. This system is characterized by a diverse complex of soils, features and habitat associations, including live oak mottes, tallgrass prairie, sand barrens, freshwater marshes and freshwater pothole ponds. Tidal bayous, brackish emergent marshes, mud and algal flats, and the shoreline frontage on Powderhorn Lake and Matagorda Bay further enhance the site’s biological diversity. It is estimated that as much as 99 percent of the historic coastal prairie in Texas has been converted to agricultural or grazing land (Gould, 1975; McMahan, et al., 1984).

PROXIMITY TO EXISTING PARKS AND REFUGES

Conservation of the ranch would complement an existing network of public and private conservation efforts along the Texas mid-coast. A 4,078-acre unit of the Aransas National Wildlife Refuge is located directly across Powderhorn Lake roughly three miles north of the ranch, while the north tip of Matagorda Island, a barrier island Wildlife Management Area (WMA) operated by TPWD, lies only three miles south of the ranch. Other conserved lands in the area include the 1,480-acre Welder Flats Coastal Preserve, 13 miles to the southwest; 7,200-acre Guadalupe Delta WMA, 20 miles to the west; and the Mad Island areas, 7,100 and 7,281 acres, managed by TNC and TPWD respectively, 28 miles to the northeast. The ranch is biologically similar to the Aransas National Wildlife Refuge at 55,004 acres (main unit), 25 miles to the southwest, which preserves a large area of Ingleside barrier-strandplain and is the primary winter residence for the endangered whooping crane. By protecting the Powderhorn Ranch, TPWD anticipates providing additional wintering grounds for the expanding whooping crane population.

PLANT AND WILDLIFE DIVERSITY

Six terrestrial plant community types are found on this property, as are seagrass and intertidal oyster habitats on submerged lands adjacent to the property. Permanent and ephemeral wetlands are found throughout the ranch within the mosaic of habitats listed above. According to the National Wetland Inventory, over 5,000 acres of palustrine wetlands have been identified on the ranch. The site’s wetlands are critical year-round for waterfowl and shore and wading birds. The palustrine wetlands, associated with depressional areas and ponds, provide an important source of fresh water for multiple wildlife species. The extensive woodlands and scrub shrub freshwater wetlands adjacent to the shoreline, and throughout the property, provide important “fall-out areas” for migrating songbirds, particularly during spring migration, when the birds are attracted to these areas to rest and feed.

Generalized Habitats of Powderhorn Ranch Based on the Texas Vegetation Classification System Phase III (TXVEG) and the National Wetland Inventory (NWI)	
Landcover	Acres
Barren / Sparsely Vegetated Mudflats and Coastal Beach	150
Evergreen Forest and Woodlands (mature live oak dominant)	4,000

Evergreen Shrubland (running live oak dominant)	5,800
Deciduous Shrubland	370
Crop/Pasture	100
Grassland (includes coastal prairie depressional areas)	2,700
Open Water (includes shallow water estuarine and palustrine)	600
Palustrine emergent wetlands	2,500
Estuarine emergent wetlands	1004
Urban Low and High Density Development (buildings, roads)	127
Total Acres Classified	17,351

RECREATIONAL OPPORTUNITIES

The same physical attributes that provide tremendous biological value also provide tremendous recreational value. Proximity to the major population centers of Houston, San Antonio and Austin makes the site relatively convenient for day use or modest extended destination visits. The property's size and diversity make it particularly suitable for public hunting, fishing, paddling and bird watching. Viability for other traditional day uses such as hiking and picnicking may vary seasonally. Unobstructed views across prairies, marshes, and open water, and the iconic coastal landscape, will appeal to many visitors.

The site has viable and huntable populations of whitetail deer, exotic sambar deer, feral hogs, coyotes, Rio Grande Turkey, dove and waterfowl. Quail are present in limited numbers, but could increase to huntable levels with habitat restoration. The size, configuration and distribution of habitat on the 17,351-acre ranch also means that significant numbers of hunters could be accommodated over an extended season, including bow hunters, muzzle loaders and youth hunting events.

Powderhorn Ranch includes 11 miles of frontage on Powderhorn Lake and Matagorda Bay, which provides access to many popular saltwater bay species like red drum, spotted seatrout and southern flounder.

Additionally, the ranch offers outstanding, high-quality potential for recreational paddlers. Access could be provided to any of several shallow (knee deep) lakes, coves, and bayous to provide safe paddling experiences for all levels of experience and age. These opportunities would complement and enhance an existing paddling trail and boat launches in and near Powderhorn Lake.

Bird watching, especially for migratory neotropical songbirds and waterfowl, is exceptional during the appropriate seasons, with bird watching for shore and wading birds being excellent

year-round. Birding in Texas generates more than \$155 million per year in tourism dollars and is enjoyed by 1.4 million travelers in the state of Texas (Texas Parks and Wildlife Department, Good Birding Makes Good Business Campaign). With the abundance of birds and wildlife, there is plenty for nature watchers to see any time of year.

MANAGEMENT AND RESTORATION PLANS

Management and restoration of the property will target conversion of “running live oak” to native prairie and savanna. Much is unknown about the exact biology and mechanics of running live oak, but some 5,800 acres of the ranch consist of an extensive network of live oak roots in the soil that continually puts up shoots resistant to shredding or burning. The result is a dense thicket up to ten feet high that is essentially impenetrable, with low biological diversity and productivity. Effective treatment for running oak consists of herbicide treatment followed by regular prescribed burning. Native grasses will flourish following brush control with the removal of competition from woody vegetation. The result will increase the biological value of the site and benefit the recovery of multiple species, including bobwhite quail.

Management will also address the hydrology of the entire ranch, taking advantage of several water wells on the property to hydrate key marshes and wetland depressions and create permanent wetlands. Wetlands would be enhanced based on the need for permanent water sources and foraging habitat for terrestrial wildlife, wading birds and waterfowl, emergent/wet soil communities that support rare plants and habitats, and intermediate/transitional wetlands necessary for a complete coastal ecosystem.

Carefully managed access for low-impact recreation will be provided to the public. The northern and eastern part of the site, with frontage on Powderhorn Lake and Matagorda Bay, has the highest recreation potential and the lowest active management requirements, since much of it is covered in mature, closed-canopy oak forest. The remainder of the site requires active management, but has high potential for restoration of native grassland and savanna and for manipulation of existing hydrology, topography and soils to create extensive freshwater wetlands. The restoration effort would also be very valuable for research and as a demonstration area for landowners in coastal counties from Matagorda to Willacy.

RESEARCH LINKS: ECONOMIC VALUES, WETLANDS LOSS

Nature-based recreation at places like Powderhorn Ranch is worth billions of dollars per year along the Texas coast. For example, in 2006 Texas saltwater anglers generated about \$981 million in retail sales and total economic output of \$1.8 billion. Statewide, wildlife watchers, including birders, generated \$2.9 billion in retail sales and total economic output of \$5 billion, and hunters generated

\$2.6 billion in retail sales and \$4.6 billion in total output. See “2006 Economic Benefits of Hunting, Fishing and Wildlife Watching in Texas,” by Southwick and Associates at https://www.tpwd.state.tx.us/publications/nonpwdpubs/media/tx_fish_hunt_wl_view_economics.pdf.

Powderhorn Ranch includes thousands of acres of freshwater wetlands and salt marshes that offer vital fish and wildlife habitat, provide natural filtering to improve water quality, and shield people and property from storm surges and sea-level rise. This is important because, from the 1950s to the 1990s, Texas lost 210,600 acres of coastal wetlands, an average of 5,700 wetland acres lost per year. See “Texas Coastal Wetlands: Status and Trends, Mid-1950s to Early 1990s” by the Texas Parks and Wildlife Department and U.S. Fish and Wildlife Service at <http://digitalmedia.fws.gov/cdm/ref/collection/document/id/1372>, and also “Coastal Habitats Shield People and Property from Sea-Level Rise and Storms” by The Natural Capital Project at Stanford University, World Wildlife Fund, and The Nature Conservancy in 2013 at <http://www.nature.com/nclimate/journal/v3/n10/full/nclimate1944.html>.