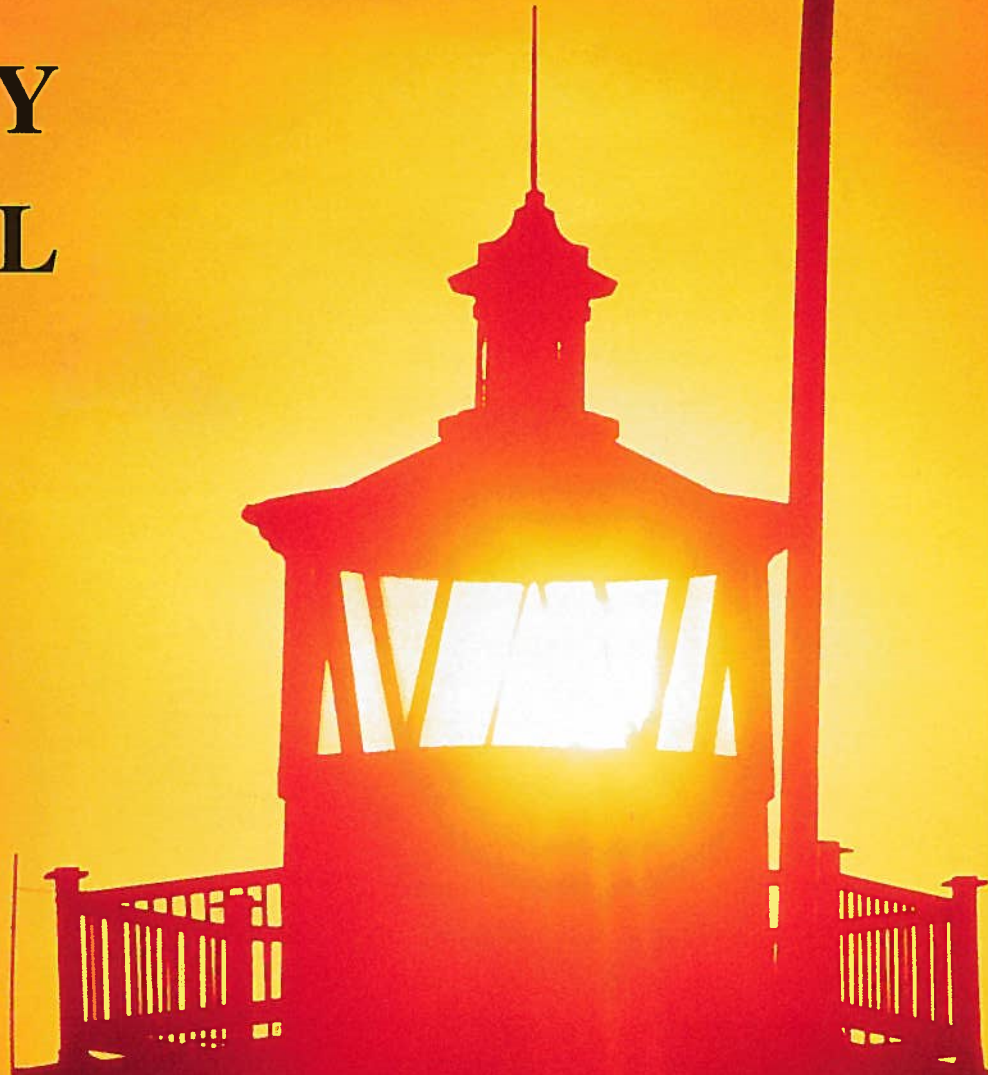


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BOTH COURTESY OF TEXAS DEPARTMENT OF
TRANSPORTATION

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Lighthouses are remnants of another era — remnants that are disappearing from our landscape far too rapidly. Texas did not boast the most lighthouses in the country, but few states had a greater number of different types of lighthouses.

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LETTERS

Letters to the editor should be limited to 300 words. *Texas Shores* reserves the right to edit letters for length and potentially libelous materials. All letters must be signed and include a daytime telephone number. Once received, letters become the property of *Texas Shores* and cannot be returned.

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SILENT SENTINELS

By JIM HINEY

They have stood solitary watch over the Texas coast for almost 150 years, their ranks now thinned by time, tide and technology. Of the two dozen or so lighthouses that once guided ships past treacherous spots along the state's waterways, only eight remain standing in whole or part. Well, technically, only seven are left along the Texas coast. One lighthouse is actually in Louisiana but it is often claimed as a Texas lighthouse because it illuminated the way for ships to make it to the ports of Beaumont, Orange and Port Arthur.

Lighthouses did, and still do, far more than complete the journeyman task of alerting ships to coastal hazards and port entries. They are also pieces of art. Some are tall and sleek tapering cylinders, others look more like wooden cottages placed aloft steel or wood legs. Lighthouses find themselves in the company of small children, puppies and teddy bears as things that are universally loved. Search the World Wide Web for sites about lighthouses and the search yields almost 100,000 Web pages.

"I don't know why I like lighthouses, but I do," says Houston oilman and ardent lighthouse advocate Dewey Stringer, expressing a feeling held by many. "A lighthouse is a peaceful thing to look at. At night, when the lights were running as they did when I was a kid, there was something real friendly about them."

Lighthouses came to America not long after colonization began in earnest. The first one was erected in Boston in 1716 and, since that time, between 1,200 and 1,300 lighthouses have perched along the country's waterways.

The newly formed Congress of the United States, in one of its first legislative acts, established the country's lighthouse system and placed responsibility for the system on the shoulders of the federal government. The Lighthouse Service established in the Treasury Department under that law gave way to the Lighthouse Board in 1852. The Lighthouse

Board remained a part of the Treasury Department until 1903, when it was transferred to the Department of Commerce and Labor, now the Department of Commerce.

The U.S. Coast Guard inherited responsibility for all lighthouses in the late 1930s and now lists almost 600 lighthouses in various states of repair around the country. Through their history, lighthouses have relied on different forms of fuel to keep their lights aglow. Various types of oil lamps gave way to kerosene, acetylene and eventually electric lights.

Early lamps used reflectors to make their lights seen at the greatest possible distance. One of the greatest advancements came at the hands of a French physicist Augustin-Jean Fresnel in the early 1800s. The lens that now bears his name comprises a central reflective bulls-eye lens surrounded by concentric rings of prisms that served to direct light from the lamp into the bulls-eye lens, creating a concentrated beam of light. Fresnel lenses have remained virtually unchanged since then.

Texas' very first light was not atop a house. A lightship anchored just off of Galveston in 1849 warned ships of the horseshoe-shaped sand bar at the mouth of Galveston Bay. It served that purpose until 1906. Another lightship marked a shallow spot 28 miles southeast of Galveston, known as Heald Bank, from 1905 to 1936.

Texas did not boast the most lighthouses in the country, but few states had a greater number of different types of lighthouses. They included towers made from brick, iron and a combination of the two materials; squat wooden houses built atop iron or wood legs; and a "skeleton" tower at the Brazos River that looked like a light atop a wide pipe surrounded by a metal skeleton not unlike oil derricks of the past.

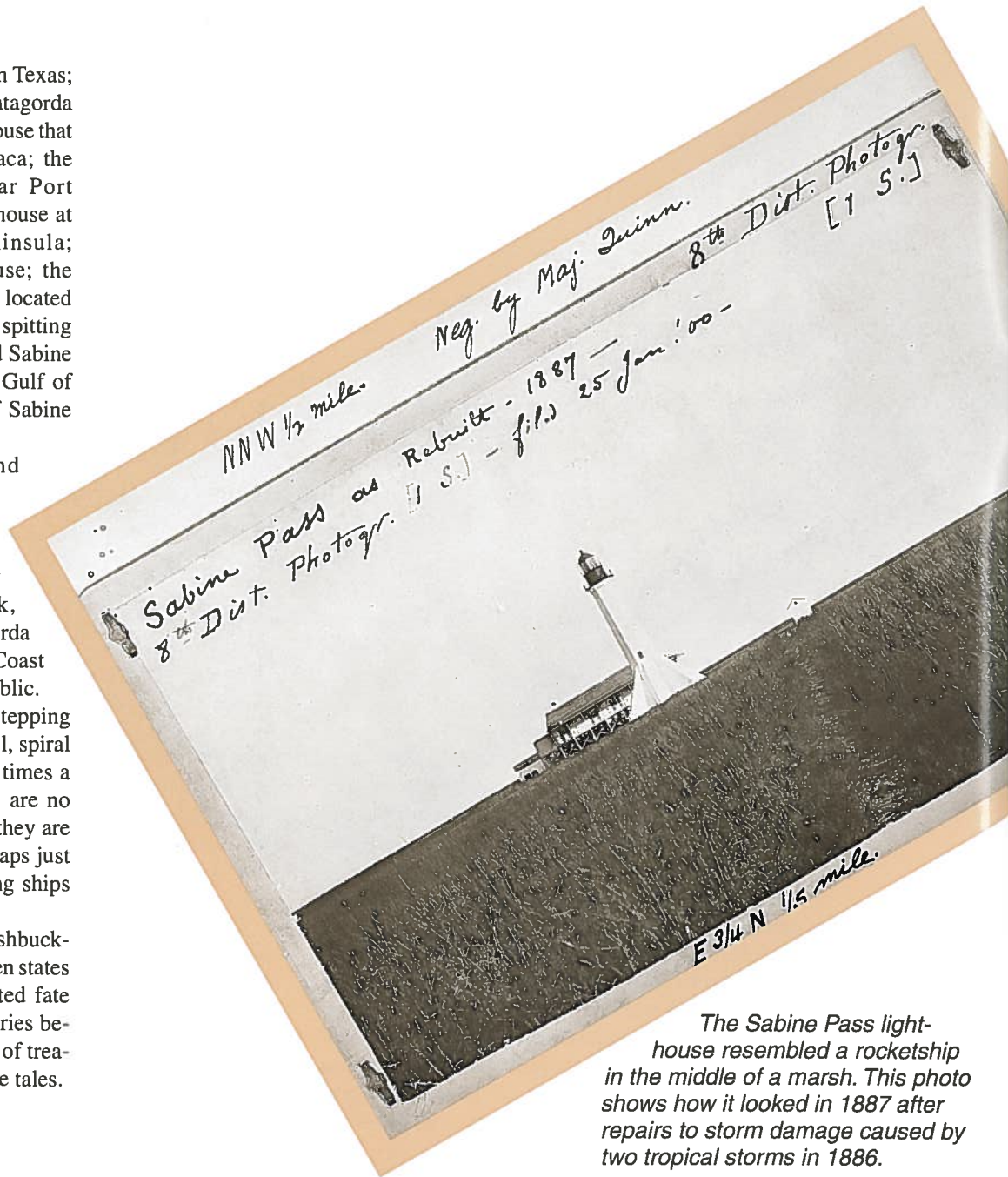
The Brazos River light does not exist anymore. Those that remain standing in part or whole are the

Port Isabel lighthouse in far south Texas; the Matagorda lighthouse on Matagorda Island; the Halfmoon Reef lighthouse that is now a museum in Port Lavaca; the Aransas Pass lighthouse near Port Aransas; the Bolivar Point lighthouse at the west end of Bolivar Peninsula; Galveston south jetty lighthouse; the Sabine Pass lighthouse, which is located in Cameron Parish, La., within spitting distance of the Texas border; and Sabine Bank lighthouse, located in the Gulf of Mexico about 16 miles south of Sabine Pass.

Only the Port Isabel and Halfmoon Reef lighthouses are open to the public. Those at Sabine Pass, Bolivar Point and Aransas Pass are privately owned. The Sabine Bank, Galveston south jetty and Matagorda lights are all still owned by the Coast Guard and are not open to the public.

Stepping into a lighthouse is stepping back in time. Footsteps on the tall, spiral staircase echo as they did many times a day 100 years ago. Lighthouses are no longer keepers of light. Instead, they are keepers of history, which is perhaps just as important a job as shepherding ships at sea.

They are symbols of more swashbuckling days, of battles fought between states and of times when sailors tempted fate every time they left port. The stories behind the lighthouses are not tales of treasure. Instead, the treasure is in the tales.



The Sabine Pass lighthouse resembled a rocketship in the middle of a marsh. This photo shows how it looked in 1887 after repairs to storm damage caused by two tropical storms in 1886.



SABINE PASS LIGHT

The place where the Sabine and Neches rivers converged to form Sabine Lake seemed an unlikely place for a lighthouse in the late 1800s. At the time there was very limited business development there in large part because the waters leading through Sabine Pass and into Sabine lake were shallow and no port in the area could rival the already thriving ports of Galveston and Indianola.

Yet Texans and their elected representatives continually pleaded with Congress throughout the 1840s and 1850s for a lighthouse at the pass. In fact, Congress appropriated \$7,500 for a lighthouse there in 1849 but the money stayed in the U.S. Treasury when a federal inspection concluded that the area was free from danger to ships and that there was too little commerce floating through the area to warrant a lighthouse.

Texans' lobbying eventually paid off in 1853, when Congress approved spending \$30,000 to build a lighthouse that would mark the entrance to Sabine Pass as well as help guide ships traveling along the Texas and Louisiana coasts.

Finding a good spot for the lighthouse was not an easy task in the swampy land surrounding the pass. The Lighthouse Board's Galveston District inspector ended up selecting Brant Point on the Louisiana side of the pass because its elevation was slightly higher than the Texas side, it offered the most solid base for a large structure and it was already owned

by the federal government.

Within four years the light burned brightly atop the 80-foot brick octagonal tower with eight buttresses that made the place look like a rocketship. The buttresses were more functional than futuristic. They served to distribute the tower's weight over a larger area, thus making it more stable on sometimes unstable ground. And, because of its isolated and swampy surroundings, the only access to the lighthouse was by boat.

As with other lighthouses on the Texas Coast, the Sabine Pass light had to weather the Civil War. And, as with the state's other lighthouses, the light was darkened and the lens removed.

Sabine Pass was not a hotbed of Civil War action in the early years of the war. Federal sailors blockaded the mouth of the pass and patrolled Sabine Lake while small bands of soldiers from each army harassed each other in minor skirmishes. Both sides took advantage of the lighthouse, using it as a lookout post from time to time. That use ended after a short fight in April 1863 when Confederate troops, who had previously noticed Union soldiers rowing to and from the lighthouse, set up an ambush there. The aftermath found four Union soldiers dead and another nine captured, with one Confederate life lost.

Just five months later Sabine Pass was the sight of one of the most famous battles in Texas' Civil War history. The Battle of Sabine Pass ended when a scant group of Confederate artillerymen managed to

drive away a superior Union force. The lighthouse itself, or rather its keepers' quarters, was briefly part of the battle when the Confederate soldiers shelled the Union soldiers who were using the building for shelter.

The rest of the war passed without much of military significance happening at Sabine Pass. When the federal government regained control of the Confederate states, the Lighthouse Board began the painstaking task of relighting the Gulf coast. The light at Sabine Pass flickered to life in late 1865.

For the next 35 years, Sabine Pass remained a little used backwater and the lighthouse keepers there maintained a quiet, if not monotonous, life interrupted only by hurricanes and the repairs needed afterward. The new century brought new life and increased ocean traffic to the pass when a group of men led by Patillo Higgins and Capt. Anthony F. Lucas defied a host of geologists and drilled for oil in a salt dome near Beaumont on a hill called Spindletop. The gusher that ushered in Texas' oil industry in January 1901, and subsequent oil finds in other Texas and Louisiana salt domes, made the Beaumont area an important shipping destination.

The federal government had already begun improvements to the pass, including constructing jetties and dredging the pass, by the time Spindletop blew, further enhancing the area's ability to handle increased boat traffic.

Ironically, improvements to the pass



The Sabine Pass lighthouse today shows the wear of 140 years. From the air, the remains of the keepers' quarters, destroyed by marsh fire, look eerily like a graveyard.

nearly spelled the end for the Sabine Pass lighthouse. The jetties eventually stretched 4.5 miles into the Gulf of Mexico, requiring that the Lighthouse Board mark the end of the structures with a light and fog signal. With that accomplished in 1924, the Board found no need for the lighthouse at Sabine Pass. But the Sabine Pass lighthouse clung to life after its district superintendent successfully argued that the lighthouse complex could still be used to house the keepers that would still be necessary to maintain the jetty light and the unmanned Sabine Bank lighthouse, saving the federal government the money it would have spent housing the keepers elsewhere.

Little changed at the lighthouse during the remaining 30 years of its life. A radio beacon was added in 1929 to aid ships with radio direction finders navigate through Sabine Lake. During the same year, electricity came to the lighthouse, allowing the Lighthouse Board to switch from a kerosene-burning light to an incandescent bulb. The lighthouse itself, which had been painted white its entire life to serve as a daytime marker for sailors, was painted with black and white horizontal stripes in 1932 after one shipping company complained that the white tower tended to blend in with its hazy surroundings.

The lighthouse's reprieve from mothballs ended in 1952 when the federal gov-

ernment finally ruled that the jetty light station filled all of the needs of shipping in Sabine Pass. For almost 35 years more, ownership of the Sabine Pass lighthouse passed from hand to hand. The federal government gave it to the Louisiana Wildlife and Fisheries Commission, which never really used the complex and eventually gave it back to the federal government.

Lamar University asked for and received the lighthouse and its accompanying 46-acre tract in 1971 with thoughts of using it for teaching and research purposes. The site's boat-only access prompted the school in 1975 to return the lighthouse to the federal government, which turned around and gave it the Louisiana Parks and Recreation Commission to form the core of a historical park. But that idea died for lack of funding from the Louisiana Legislature. Still, the state held onto the property for another ten years before giving it back to the federal government. This time, the government offered the site for sale to the highest bidder. During a public auction in Houston in 1986, Houston businessmen P.G. Grenader and William Pielop bought the property for \$55,000.

What Grenader and Pielop bought for their money was just the lighthouse and surrounding 46 acres of land. A swamp fire in 1977 claimed the keeper's quarters, which were never rebuilt.

Grenader and Pielop have since died, leaving the lighthouse to their heirs.

Grenader's two sons have followed in their father's footsteps, making a living renting and managing warehouse space, primarily in Houston. One of the sons, David Grenader, is at a loss to explain why his father wanted to buy the lighthouse. He ventures the guess that his father thought "it was an interesting property. I don't think they had any plans to do anything specific with it."

The surviving Grenaders and Pielops do have specific plans for the lighthouse. They have entered into an agreement with the Cameron Parish, Louisiana, government and "we hope they will restore it," says David Grenader. "We have agreed that if they do restore it, we will ultimately transfer ownership to them if it can be used for a public purpose."

The public purpose Grenader seeks is a park or museum, perhaps like the one the Louisiana Parks and Recreation Commission envisioned.

Above everything else, Grenader believes the lighthouse needs to be restored because of its "historical uniqueness. It was built in the 1850s and it was present at the time of the Battle of Sabine Pass during the Civil War. It was used as an observation post during that battle.

"It is part of history, perhaps not a major part, but it is certainly part."



SABINE BANK LIGHT

The southernmost example of a caisson lighthouse sits off the Texas Coast on a shallows known as Sabine Bank. A caisson lighthouse comprises a metal cylinder base that is towed into position and set on end, and then filled with cement or rocks. The keepers' quarters, light and all other equipment are built atop the base.

Standing in about 18 feet of water, Sabine Bank remains the only lighthouse along the Texas coast still used as an aid to navigation. Folks around the Sabine Pass area of Texas commonly refer to it as the 18-mile light, not because it is 18 miles from shore but because it is about 18 miles from the Sabine Pass lighthouse.

Until the 20th Century, most of the scant shipping traffic around Sabine Pass simply navigated around Sabine Bank's 30-mile length and 5-mile width about 16 miles southeast of Sabine Pass. The dawn of the new century had already seen an increase in shipping traffic before oil was discovered at Spindletop. That find only made the situation worse. More and larger ships were frequenting the ports at Beaumont and Port Arthur. Not surprisingly, the increased ship traffic led to increased groundings on Sabine Bank. Congress had realized the importance of the region's growing business trade in 1899 and approved building a lighthouse at Sabine Bank to warn ships of the perilously shallow water, but legislators waited a year to appropriate \$40,000 for the structure. They added another \$40,000 to the project in 1901.

The Sabine Bank lighthouse was not

predestined to be a caisson structure. The Lighthouse Board made that decision through a process now well-known to government operations everywhere—the low bid. Because of the mud and shell base at Sabine Bank, engineers decided that the lighthouse there needed to be either a caisson or a screw-pile structure that featured a lighthouse atop iron pilings that were screwed down into the seafloor. The Lighthouse Board went out for bids on both types of structures and let the low bid decide the lighthouse's ultimate shape.

A Michigan company won the right to fabricate the lighthouse and began shipping the pieces to Texas by rail in 1904 and work at the offshore site began in June of that year. By late July, the caisson had been sunk into the seabed and filled with concrete. Workers also put several hundred tons of large rocks around the outside base of the caisson to protect it from waves and currents.

Work on the lighthouse stopped in August 1904 because the Lighthouse Board ran out of money for the project, despite the fact that Congress had added \$10,000 to the original \$80,000 appropriation earlier in 1904. In March 1905, Congress appropriated the final \$12,000 needed. When the lighthouse was finally completed in early 1906, the total cost was about \$101,000. Its light still sits 72 feet above the water and it is visible to ships for 11 nautical miles.

As with other isolated lighthouses, life at Sabine Bank was tedious and lonesome at best. Since the lighthouse was intended

to prevent large ships from running aground, no large ships ever stopped at the lighthouse. Passing traffic was limited to fishing boats. What daily life lacked in excitement, hurricanes more than made up for. In particular, the 1915 storm that wreaked havoc in Galveston did not pass Sabine Bank peacefully. The wind ripped away most of the roof covering the walkway around the lighthouse, and tore away storm shutters and some of the hatches.

It took four years before repairs and some additional work to strengthen the lighthouse were completed, just in time for the 1919 hurricane that pounded the Texas and Louisiana Coasts.

Isolation and cramped quarters took their toll on the men who maintained the lighthouse. Personal conflicts erupted often and led to frequent searches for new keepers. By 1922, the Lighthouse Board had tired of pouring money into the lighthouse for maintenance, supplies and people. The decision was made to convert the lighthouse from using a kerosene lamp to one that used acetylene to produce the characteristic flashing light. Acetylene lamps needed far less maintenance than kerosene lamps and allowed care of the Sabine Bank lighthouse to fall to the keepers at the Sabine Pass lighthouse.

In August 1922, Sabine Bank became the first automated lighthouse on the Texas Coast.

The Coast Guard now makes one annual trip to Sabine Bank to make sure the



The Sabine Bank lighthouse (above) with its fog signal clearly shown on the left side, began service in 1906. Rusted and in disrepair today (right), Sabine Bank remains the only active lighthouse serving as an aid to navigation along the Texas coast.

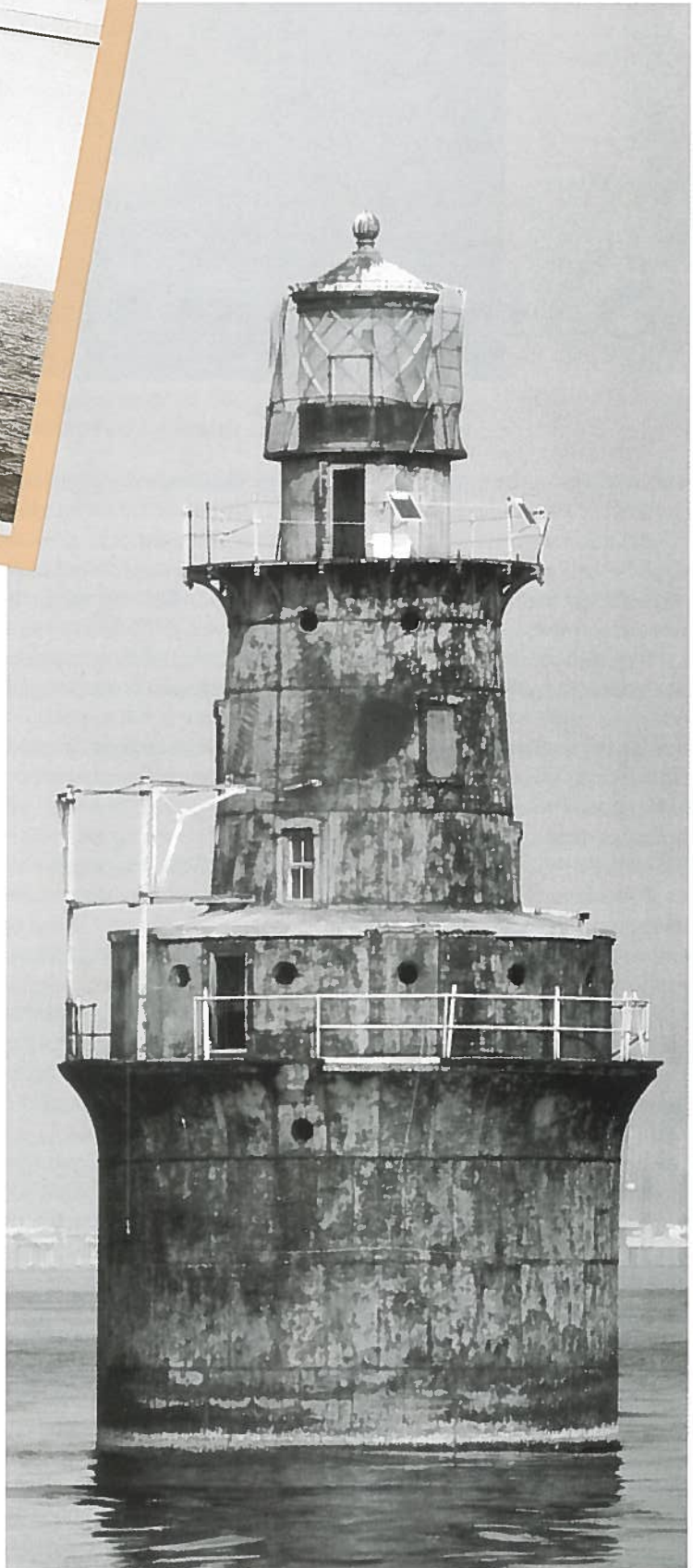
equipment there is in good working order, but otherwise the 83-year-old old lighthouse is in “severe disrepair,” says Boatswain Mate Chief Robert Rioux, officer in charge of the of the Coast Guard aids to navigation team stationed at Sabine Pass.

“It’s pretty deteriorated,” observes Rioux. “We’re trying to settle a funding issue on the lighthouse. Our civil engineering unit in Miami is now deciding what we will do with lighthouse — whether the Coast Guard will keep it, give it to the state or do something else with it.”

The Coast Guard also has what Rioux refers to as a five-year plan of general maintenance on the lighthouse, “Maintenance just like you would do on your own house.”

Age and the elements are eating away at the lighthouse despite the Coast Guard’s best efforts.

“With the salt environment and the waves pushing up against it during storms, it takes quite a bit to maintain that lighthouse,” Rioux says.





BOLIVAR POINT LIGHT

With the exception of four years during the Civil War, a lighthouse in one form or another has welcomed ships past Bolivar Point and into Galveston Bay since 1852. The lighthouse there now is actually the third and longest lived to stand in that spot.

Patrick Boyt's family has owned the lighthouse and accompanying property since 1947, although the lighthouse was not the reason his father paid \$5,500 for the two-acre site shortly after World War II ended.

"My father wanted a summer house at Bolivar," remembers Boyt, whose two sons now own the property. "The caretakers' houses are beautifully built. Although they had been vacant and were in horrible shape when we bought the place, they were built as only the government would build something, with 65-foot pilings, cast iron caps and solid walls, no studs."

The houses were built to withstand the punishing hurricanes that blow through the area occasionally and are not likely to go anyplace "unless there is a tornado," Boyt laughs.

The lighthouse was a bonus for the Boyt family, which farmed for a living in the relatively nearby Liberty County town of Devers.

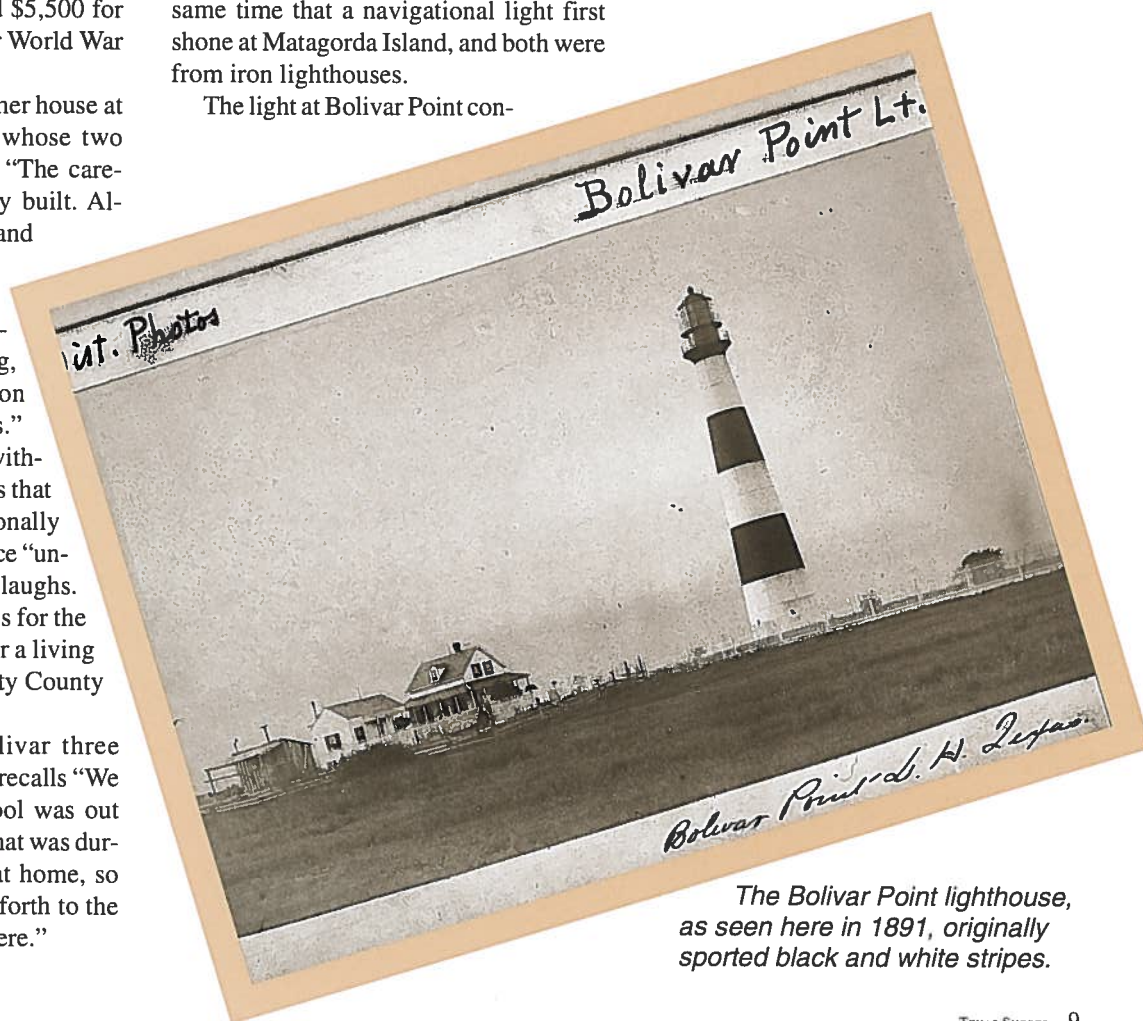
"We lived down at Bolivar three months out of the year," Boyt recalls "We moved there as soon as school was out and stayed until Labor Day. That was during the time of live-in help at home, so my father could go back and forth to the ranch and we stayed down there."

Boyt talks of climbing the 125-foot tower's spiral staircase often as a child and pausing to enjoy the wonderful breeze that blew through the glassless light chamber. A generation later, the younger of Boyt's two sons took advantage of that breeze by stringing a hammock across the inside of the light chamber.

The first light at Bolivar Point began shining in December 1852 at about the same time that a navigational light first shone at Matagorda Island, and both were from iron lighthouses.

The light at Bolivar Point con-

tinued to shine for nine years before the Civil War made it go dark. Confederate troops turned off the lights of most Texas lighthouses during the war so Union vessels could not use them to navigate the state's waterways. The Confederates even unsuccessfully attempted to blow up a couple of the lighthouses so they could not serve as Union lookout posts, should they fall into enemy hands.



The Bolivar Point lighthouse, as seen here in 1891, originally sported black and white stripes.

All it takes is money ...

Bolivar Point's lighthouse simply disappeared sometime during the war. Confederate troops totally dismantled the structure for a reason known only to them, although there is speculation that they wanted to melt down the iron plates and use the metal to produce war materials. All that remained at the site was the concrete base.

After the war ended, the Lighthouse Board set about relighting the most important lights along the coast. A three-story wooden tower served as the second light station, albeit a temporary one, at Bolivar Point beginning in June 1865. The third and final lighthouse at Bolivar Point was seven years away.

To say the least, the Bolivar Point lighthouse is a sturdy structure. Its brick-lined iron plates have withstood all that nature and man have thrown at it. Its first test came during the great storm of 1900 that killed 6,000 in Galveston and very nearly destroyed the town. About 125 people sought refuge inside the tower, riding out the storm on the narrow winding staircase and watching the water in the tower slowly rise. By several accounts, the storm pounded the tower so violently that it swayed like a wheat stalk in the wind. When the storm ended, those people who were lucky enough to be inside the tower emerged to find the bodies of people who were not so fortunate.

The story was the same 15 years later, when another large hurricane hit the peninsula. This time, however, about 60 people sought shelter in the tower.

The lighthouse may have the distinction of being the only one in the country to survive an artillery attack by friendly troops during World War I. Shells first fell near the lighthouse in November 1917 and continued for two hours. The source of

the shelling turned out to be artillerymen at Fort San Jacinto.

Why they shelled the lighthouse is not totally clear. One story goes that they had intended to fire their shells into the Gulf of Mexico on that foggy afternoon, but a plotting error sent the shells to Bolivar Point. Another story suggests that the artillerymen were practicing with old ammunition and they calculated the elevation of their guns based on the belief that the powder inside the shells had weakened with age and would not propel the mortars all the way to the lighthouse. Whatever the reason, the lighthouse and keepers' quarters received a few holes that were quickly patched and the tower was none the worse for the wear.

Thirty years later the lighthouse received its most significant damage when tons of ammonium nitrate fertilizer aboard a French ship caught fire and exploded less than 10 miles away across Galveston Bay at the Texas City docks. The blast that killed more than 500 people and destroyed a good part of Texas City happened not long after the Boyts bought the lighthouse property. Despite the strength of the blast, it did little more than knock out some of the bricks inside the tower, recalls Boyt.

A brand new lighthouse set at the end of the Galveston jetty in 1918 began the demise of the Bolivar Point lighthouse. The powerful jetty light was in a better location to guide ships into Galveston Bay, so the Bolivar Point lighthouse became increasingly less important. The Lighthouse Board first sought to decommission the Bolivar Point light in 1930 but reconsidered the decision in the face of public protests from locals who had grown attached to the lighthouse.

The reprieve was short-lived. Finan-

cial difficulties brought on by the Great Depression led the Lighthouse Board to turn out the Bolivar Point light for good three years later. The Fresnel lens is now on display in the Smithsonian Museum.

Today the Boyts still use the Bolivar Point property as vacation homes. Patrick Boyt admits that he would like to restore the lighthouse to its original condition, much like grocery store magnate Charles Butt did with the Port Aransas lighthouse.

All it takes is money.

"We got a bid in the 1950s for getting the lighthouse sandblasted and painted, and at that time the bid was \$50,000," says Boyt. "We decided the rust didn't look too bad."

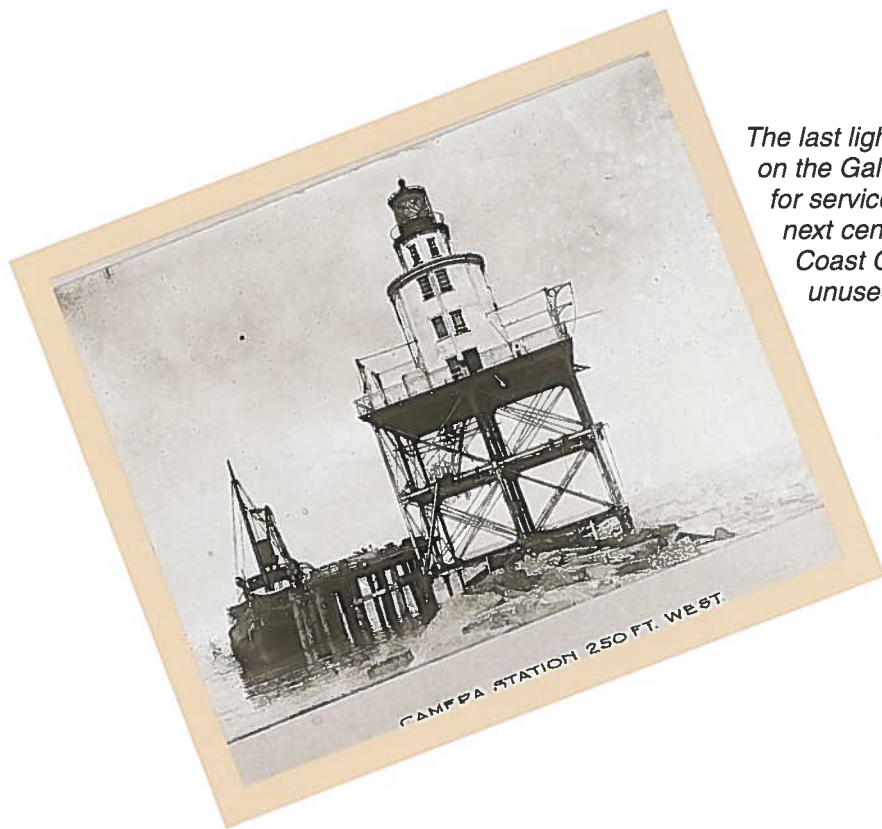
Several preservation-minded individuals and organizations have talked with the Boyts about helping them raise money to restore the tower, but each offer came with the same string attached — they all wanted public access to the lighthouse, which is something the Boyts are not yet ready to grant in large part because of the liability the family could face if a visitor is injured while touring the tower.

Still, trespassers hungry for a closer look at the lighthouse are a continuing problem, says Boyt.

"The one time we ever leased the property out was for a movie in the 1970s," he says with a bit of a laugh. "It was a good movie with Patty Duke called *My Sweet Charlie*. The movie provided, unfortunately, a blueprint for breaking in to the property."

As with the Matagorda lighthouse, the only residents of the Bolivar Point light now are barn owls that prove a constant amazement for Boyt. "It's an interesting example of nature using tools," he says. "The owls have learned to rattle their beaks in the gutter to make the mice run out of the end of the water spout."





The last lighthouse built in Texas, the one on the Galveston south jetty stood ready for service in 1918. It will survive into the next century, but not for long. The U.S. Coast Guard plans to remove the unused, rusting light station in 2001.

GALVESTON SOUTH JETTY LIGHT

Ships trying to navigate the Houston Ship Channel at night thanked the south jetty light for keeping them off the jetty and in the Houston ship channel. The last of the Texas lighthouses built, the south jetty light only has a year or two left before it vanishes from the spot it has held since 1918. The Coast Guard plans to dismantle the rusting structure, probably in the year 2001, according to the Coast Guard's aids to navigation team based in Galveston. Automated lights sitting atop metal poles on the jetty long ago replaced the lighthouse's beacon.

That the jetty light existed at all is a testament to perseverance. A light marking the entrance to Galveston Bay was first suggested in 1883, a full 35 years before the station became reality. In fairness to the Lighthouse Board, the delay in building the south jetty lighthouse was due mostly to the fact that the jetty kept growing longer and longer. The board was hesitant to build a permanent structure until the jetty was finished, which did not happen until 1903.

Original plans called for the lighthouse to be a wooden structure atop iron piles driven into the jetty. However, the force of the 1900 hurricane led federal engineers to rethink their plan and substitute a stronger iron structure atop the piles.

Higher than expected bids and delays by Congress in appropriating funds delayed the project until 1909. A strong storm that year delayed the project even further, destroying everything at the construction site except some of the pilings. Then everything was put on hold for several more years while the Lighthouse Board waited to see if the U.S. Army Corps of Engineers planned to extend the jetty even further into the Gulf of Mexico.

Construction finally began again in 1914 but was not completed before the hurricane of 1915 hit the Galveston area. It bent many of the support structures under the lighthouse but did relatively little damage to the lighthouse itself.

Although the lighthouse was ultimately finished by the summer of 1918, World War I kept the light from shining

immediately. The Navy Department ordered that no lights designating Galveston Bay be lit for fear that German submarines could gain easy access to vital shipping channels.

The jetty light eventually came to life in November 1918, just one day after the Germans surrendered to allied forces.

The lighthouse and its keepers lived basically uneventful lives for the next 50 years, save for the occasional hurricane. Electricity from the mainland made it to the station in 1969, doing away with the need for generators to provide the light's power and doing away with the need for the humans who maintained the generators.

Less than 20 years later, automated lights on poles at the end of the north and south jetties made the lighthouse obsolete and its light was turned off for good. After the station is dismantled, the sole reminder of its existence will be the lighthouse's original Fresnel lens, now on exhibit at the Galveston County Historical Museum.



HALFMOON REEF

A scant two years after the Matagorda lighthouse went into operation, the Lighthouse Board first proposed establishing a light in Matagorda Bay to warn ships of the danger posed by the mud and oystershell shoal at Halfmoon Reef, some 10 to 12 miles northeast of the Matagorda light.

Now, more than 140 years later, a light still shines from the Halfmoon Reef lighthouse, although it does little more than attract the attention of motorists traveling along Highway 35 at the east end of Port Lavaca.

Saved by a local dredging company from possible destruction, the lighthouse now serves as a museum and a constant joy for Port Lavaca attorney and history addict George Fred Rhodes.

Rhodes, who is also chairman of the Calhoun County Historical Commission, helped put the Halfmoon Reef lighthouse where it is today and he is also part of a foundation trying to raise money to restore the Matagorda Island lighthouse. He credits his devotion to history and historical structures to his teachers at the tiny Six Mile Community School in rural Calhoun County and to the fact that “I didn’t like math. You can’t short change me, but that is not one of my favorite subjects. I liked history and geography and those types of things.”

Although proposed in 1854, the Halfmoon Reef lighthouse did not take shape until 1858. Given the muddy foundation at the lighthouse site, engineers decided a screwpile structure would be most effective. A hexagonal house was set atop iron pilings screwed into the Matagorda Bay bottom. About 35 feet above the water’s surface, the light

warned passing ships of the shoal’s presence.

The Civil War came to Halfmoon Reef as it did to other Texas lighthouses, but not with as much emphasis. Although the light was dimmed and its lens and light were eventually removed, as they were in other lighthouses, Halfmoon Reef escaped any attempt at destruction by either Army. Apparently, the lighthouse’s position in the eastern part of the bay was not strategic enough for either side to care.

“Larger vessels didn’t really enter Matagorda Bay because of shoals and reefs. Only the smaller vessels could,” Rhodes notes. “Perhaps a reason why the South did well in Texas is because the Confederates could take their commerce into the bays and they weren’t challenged by larger Union ships.”

That the lighthouse survived the Civil War intact is not nearly as surprising as the fact that it successfully weathered the hurricane of 1875 that wiped out nearby Indianola, which at the time rivaled Galveston as the state’s preeminent port. The lighthouse’s luck did not hold for long as it fell victim to the hurricane of 1886. Faced with the choice of making costly repairs or abandoning the station, the Lighthouse Board chose the latter mostly because the railroad had replaced ships as the primary transportation for goods into the area.

Halfmoon Reef lighthouse might have been destroyed altogether had not a Lighthouse Board engineer suggested that the station be used as a reference point for daytime mariners. That decision was a stroke of luck for the lighthouse, because it set the stage for the light to be relit about 15 years later following repeated requests

from those who made a living from Matagorda Bay.

Instead of placing another crew at the lighthouse, however, the lighthouse Board installed a lighting system that could operate for five days without daily maintenance. During the 1930s, the so-called five-day light was replaced with an eight-day light.

Halfmoon Reef light survived many storms during its almost 90-year life in Matagorda Bay, but it could not withstand the hurricane of 1942. That storm washed away the building’s porch and left the wooden house leaning to one side atop the pilings. This time, there was no doubt but that the Lighthouse Board would close the station down rather than repair it. Still, the station’s luck continued and it was rescued by the owners of a local dredging company, W. H. Bauer and Harry Smith. Their Bauer-Smith Dredging Company eventually became one of the largest dredging companies in the world.

Bauer and Smith bought the wooden house and ended up fighting with the military when they tried to move it to their construction yard in Point Comfort. As the work crew tried to slip the house off of the pilings and onto a barge, military personnel ordered them to set the house on fire and leave the area because bombing practice was scheduled to begin there in less than an hour. Workers refused to leave without the house and they eventually won that battle.

For almost four decades the Halfmoon Reef lighthouse served as the quarters for Bauer-Smith’s night watchman, remembers Rhodes. By 1979, the lighthouse had begun to deteriorate and the company no longer used night watchmen, so the lighthouse began its final trip.



The view above is similar to what the keepers at Halfmoon Reef must have seen as they climbed up into the lantern room for daily maintenance duties. Saved from possible destruction during the 1940s, Halfmoon Reef lighthouse (right) is now a museum, located on Highway 35 in Port Lavaca.



A light still burns in the lighthouse (below), although it is for purely nostalgic purposes as the building stands watch over Lavaca Bay.



“One day, W. H. Bauer called me and said, ‘George Fred, how would you like to have the Halfmoon Reef lighthouse? I think it ought to be fixed up and kept. I’ll help you fix it up.’”

Bauer donated the lighthouse and \$10,000 for repairs to the Calhoun County Historical Commission, leaving Rhodes with one obstacle to overcome — moving the building by truck across the causeway linking Point Comfort and Port Lavaca. Rhodes lobbied his elected state representatives, who helped him get a Texas Highway Department permit to move the lighthouse. All he needed then was the money for the move.

Rhodes figured his best chance was finding someone with about \$1,000 to

spare and who had a fondness for lighthouses. The choice was relatively easy. Rhodes turned to his friend from days spent as regents for Texas A&I University — HEB grocery store chain owner Charles Butt, who himself owned the Aransas Pass lighthouse.

The Halfmoon Reef lighthouse was set down next to the Bauer Community Center in Port Lavaca. Between 1979 and 1980, Boy Scout Michael Crane of Olivia restored and painted the lighthouse as part of his Eagle Scout project. It was later designated a Texas historical landmark.

Today the lighthouse welcomes visitors curious about a time when manned lights stood watch over tricky waters. The

three main rooms on the ground floor showcase marine and lighthouse memorabilia along with guides to attractions in the area.

A short but steep climb to the top of the lighthouse finds an incandescent bulb still in place and the 19th and 20th centuries mixing together in a space scarcely six feet across. The view out of the front of the lighthouse is of Port Lavaca and the traffic on Highway 35. But looking out of the back of the lighthouse yields a view of Lavaca Bay and the timeless look of water that goes with it. Listen closely enough as a gust of wind whistles a bit through the old wooden building and it is not hard to imagine being on Halfmoon Reef again.



MATAGORDA LIGHT

Life for the keepers, at least the last ones, of the Matagorda lighthouse was very enjoyable. Living on the eastern tip of Matagorda Island was definitely different from living across Espiritu Santo Bay in the nearest mainland town of Port O'Connor.

"There was a lot of solitude but they allowed us to have as much company as we wanted, as long as it didn't interfere with the operation of the light," recalls Ruth Barr, widow of the lighthouse's last keeper, Arthur Barr. "We did have a lot of company. We raised two girls over there and they will tell you right now that they enjoyed it too. It was just a different life from living in town. You had to find your own entertainment.

"We had radios and we all liked to hunt and fish, that was our entertainment. We played ball with the kids and the assistant keeper was always more like one of the family. We just found things to do."

Arthur Barr died in January of this year at the age of 92, just a few months short of the couple's 58th wedding anniversary. Ruth, who lived most of her life either on Matagorda Island or in Port O'Connor, now lives near one of her daughters in Ingleside.

"I was raised at the lighthouse," says Barr. "My grandfather was the keeper and then my father was the keeper and then Mr. Barr was the keeper."

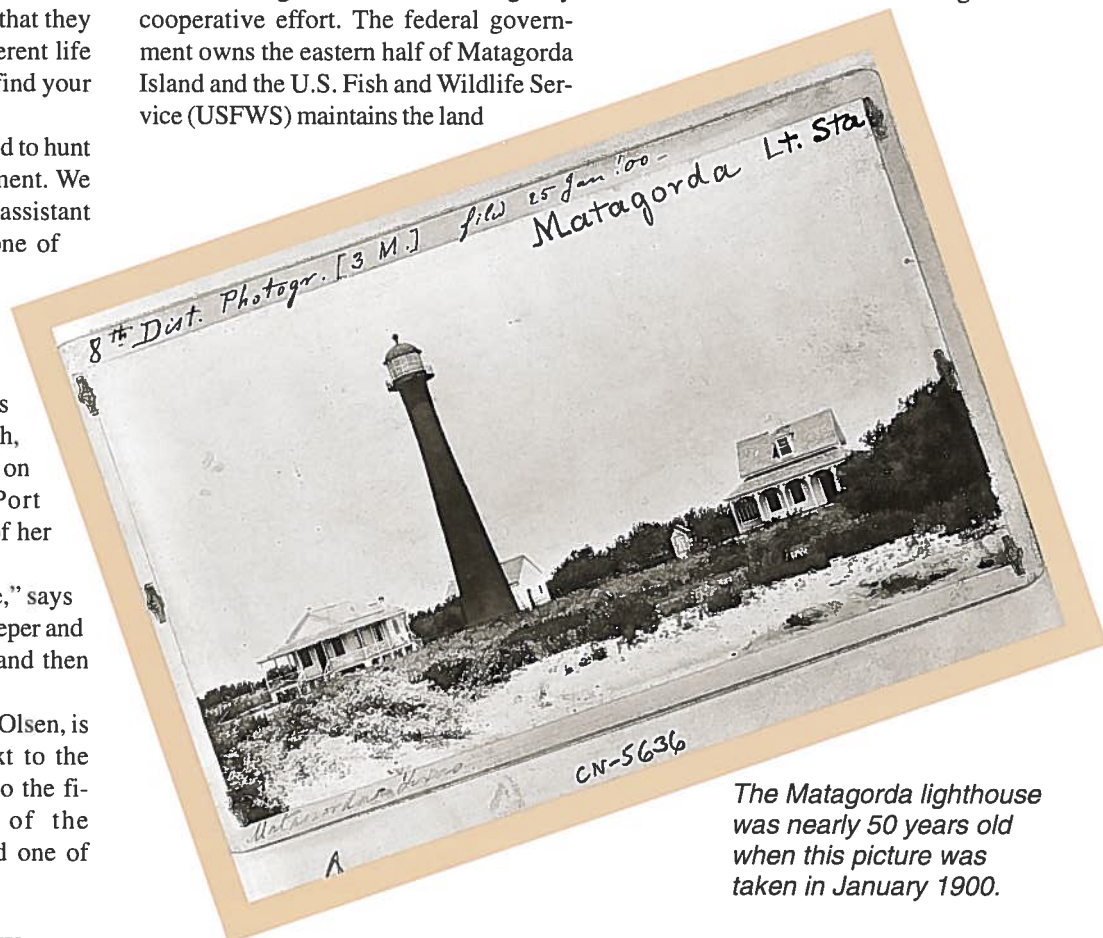
Barr's grandfather, Theodore Olsen, is buried in a small cemetery next to the lighthouse. The Cemetery is also the final resting place for one of the lighthouse's former keepers and one of his children.

All that remains of the lighthouse complex is the lighthouse itself. The keepers quarters are long gone. The smaller of two homes on the property was lost in the 1942 hurricane that also damaged the Halfmoon Reef lighthouse. A.W. Hawes, whose family owned most of the land on Matagorda Island that is now a federal wildlife area, bought the other dwelling and moved it to the corner of Jefferson and 16th streets in Port O'Connor, where it continues to serve as a private residence.

The lighthouse itself is part of an unusual multi-government, multi-agency cooperative effort. The federal government owns the eastern half of Matagorda Island and the U.S. Fish and Wildlife Service (USFWS) maintains the land

as the Matagorda Island Wildlife Conservation Area. The Texas Parks and Wildlife Service (TPWD) is a tenant of sorts, operating Matagorda Island State Park at the far eastern edge of the federal land. The lighthouse sits on a 10-acre tract of land near the eastern edge of the state park, yet it is still owned by the Coast Guard, at least for now.

But if all goes as planned, the Coast Guard could transfer ownership of the lighthouse to the USFWS by the end of the summer. If that happens, the USFWS will turn around and lease the lighthouse



The Matagorda lighthouse was nearly 50 years old when this picture was taken in January 1900.

site to Calhoun County to maintain. TPWD will act as lighthouse keeper. That move will allow Houston oilman Dewey Stringer, Calhoun County's George Fred Rhodes and their Matagorda Island Foundation to raise the \$800,000 or so they say they need to renovate the lighthouse and build nature trails and a new visitors' center in the state park.

Like Rhodes, Stringer is an avid historian, at least where lighthouses are involved. He is passionate about restoring the Matagorda lighthouse to its former glory because "the history of Texas revolved around Matagorda Island. That lighthouse served as the gateway, since 1852, to a large part of Texas."

Long before the lighthouse was built, the Matagorda Bay area made Texas history. The French explorer La Salle accidentally wandered into the bay in the 1680s while looking for the mouth of the Mississippi River. He lost both of his ships there — one in Pass Cavallo as it tried to enter the bay and one later in the bay itself — and he lost his life trying to return to French settlements in Canada for help.

Many historians credit La Salle's presence in the area with renewing the Spanish interest in Texas that helped develop the state during the 18th and 19th centuries.

La Salle did not have the help of the Matagorda light to guide him into the shallow and sometimes dangerous waters of Matagorda Bay, but that help became necessary with the founding of Indianola in 1844. Indianola was the Galveston of the middle Texas coast and, listening to Rhodes describe the town, was actually larger than Galveston.

The Republic of Texas talked about putting a lighthouse at Pass Cavallo in 1845 but delayed action because of the state's pending annexation in 1846. Texas legislators felt it much more fiscally prudent to let the federal government pay for the lighthouse, which is what ultimately happened.

Iron lighthouses at Matagorda Island

and Bolivar Point went up almost simultaneously and in late 1852 their lights first shone within days of each other. Both lights went out in 1861 as Civil War action increased in Texas.

Rhodes is quick to point out the often overlooked fact that the largest concen-



Today, a family of barn owls, including these three chicks, are the sole inhabitants at the lighthouse. This is a view from the lantern room down to the room that housed kerosene and the clockwork mechanism that turned the light.

tration of Union soldiers in Texas was on Matagorda Island. About 8,000 troops called the island home for about a month.

The soldiers arrived by ship from Brownsville, where they had let off a small group of Union soldiers whose mission was to scout the Rio Grande. A few more soldiers debarked at Corpus Christi but the vast majority landed at Matagorda Island.

At the same time, about 500 Confederate soldiers occupied Fort Esperanza, an earthen fortification boasting about a dozen cannons located on the east end of Matagorda Island.

Originally, the Union troops planned to leave the island and spread out through Texas, with some heading for Austin and San Antonio while others made their way east toward Houston and Tyler. But their plans changed about a month after their arrival and they were sent to New Orleans, where they prepared to reinforce Union soldiers who were fighting heavy resistance in northern Louisiana.

During their time on the island, Union soldiers dug a network of trenches that are still visible today on the south side of

the lighthouse. There were running skirmishes almost daily between the two forces. Stringer, standing on a platform built to give park visitors a better view of the trenches, describes the war on Matagorda Island.

Both sides fought for six days a week and then observed an informal truce on Sundays. "Each soldier was responsible for his own larder, his own food, so they would fight for six days and then use Sunday to hunt and fish for their food. There is even some evidence that soldiers on the two sides traded goods with each other."

Confederate soldiers eventually bowed to the superior number of Union forces. As Stringer puts it, the rebels realized they were "going to get their butts kicked," so they buried the cannons and abandoned the fort. Stringer and Rhodes hope to one day find those cannons and add some of them to the exhibits they plan at the lighthouse.

Before they left the island, Confederate soldiers attempted to blow up the lighthouse to keep it out of Union hands. But the explosive charge did little more than damage some of the iron plates.

Confederate explosives were the least of the lighthouse's worries. Shortly after the war ended, Lighthouse Board engineers noted that beach erosion put the lighthouse perilously close to the water's edge, placing it in danger of falling into the sea. The only option was to move the lighthouse about 2 miles further west, which they did in 1872 using a narrow gauge railroad built for just that purpose.

"My father was born in 1878 on Matagorda island," says Port O'Connor resident Joe Hawes. "He told me that my grandfather worked on moving the lighthouse. They used sail for propulsion and when the wind wasn't right they used mules to pull the heavy plates along the rail. Pieces of the old railroad are still there."

Hawes speaks of Matagorda island with both love and bitterness in his voice. His family owned most of what is now federal land before the federal govern-



The graves of two lightkeepers and the child of a lightkeeper rest next to the tower that was the focus of their lives while on Matagorda Island.



At left, the spiral staircase leading to the top of the Matagorda lighthouse is shown as it is today, which is a marked difference from when the lighthouse was still in use in 1978 (below).



ment took it in 1940 for use as an air base and bombing range.

Hawes remembers being a 20-year-old when federal marshals served papers on all of the landowners ordering them to remove all of their personal belongings and livestock within 10 days.

“The government didn’t get around to paying my family for the land, until 1944,” Hawes says. “They put us out of business, took everything we had away from us and then, through a court-appointed commission, they set an average value of \$7 an acre, improvements and all.”

Ruth Barr and her family were among the few to stay on the island after the government took possession, but she was not there long. World War II began shortly before the birth of her first daughter in 1942. She headed for the mainland to give birth while the Coast Guard sent several men to be stationed at the lighthouse. With one keepers’ house wiped out by the hurricane that year, all of the men had to bunk in the remaining house. Barr didn’t return to the island until two years later, after the Coast Guard built barracks for its men.

Barr’s grandfather was lured to Matagorda Island by the prospect of spending more time with his family. He had been on a lighthouse maintenance crew based in New Orleans, but that meant he spent most of his time away from home delivering supplies to or repairing lighthouses.

An opening for a keeper at the Matagorda lighthouse opened in 1913 and Theodore Olsen jumped at the chance. While living on the island, Olsen’s daughter met William H. Heinroth. The two eventually married and gave birth to their own daughter, Ruth. Olsen convinced

Heinroth to become the assistant keeper, a position he served until Olsen’s death in about 1918. At that point, Barr’s father became the keeper. In 1938, Barr’s father hired Arthur Barr, a local oysterman, as his assistant. Ruth and Arthur married about three years later.

The Barrs lived in the smaller of the two keeper’s homes until it was destroyed in 1942, forcing them to move into the larger home. Arthur Barr rode out that storm in the lighthouse and later said that

the water rose at least seven feet inside the structure, cutting off any escape route for him and his crew.

When the Barrs daughters reached school age, life again changed for the family. Ruth and the girls moved to Port O’Connor for nine months out of the year so the girls could attend school. They made weekend trips to the lighthouse.

Before 1945, kerosene fueled the light in the tower. That meant that someone had to stay up and watch the light throughout

the night because “it would just go out for no reason at all,” Barr says. “One of the keepers would take the watch from sundown until midnight and the other man would take the watch from midnight to daylight.”

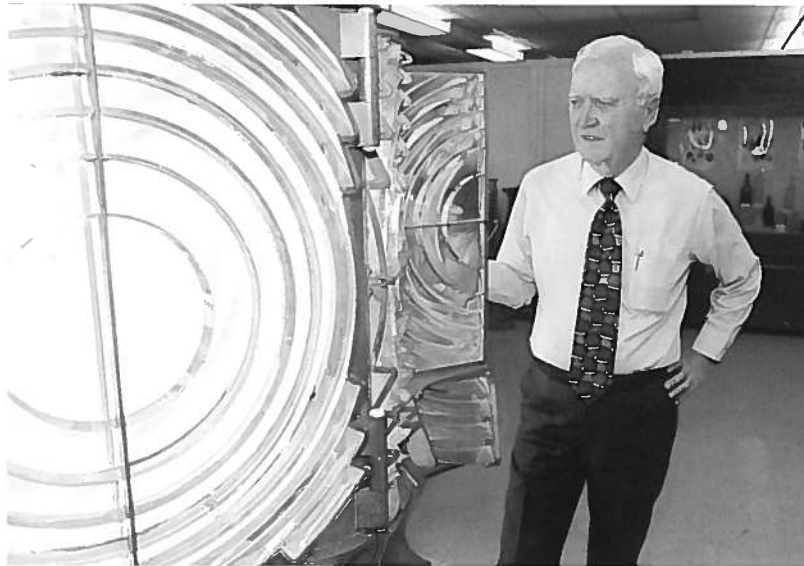
The Coast Guard installed a bank of batteries to run the light in 1945. That did not end the all-night shifts kept by the keepers “but the light wasn’t as tricky as it was when it operated on kerosene,” she says. “In about 1951 they put in an alarm system so if the light went out the alarm would go off, so consequently we didn’t have to sit up with it at night.”

That alarm was part of one of the most memorable incidents during Barr’s years at the lighthouse. As Barr tells it:

“One morning in the early 1950s at about 4 a.m., we were just about ready to get out of bed, the alarm went off. My husband and I were sleeping downstairs and the assistant keeper was upstairs. We ran over each other in the middle bedroom trying to get outside so we could cut the alarm off and see what was wrong. The assistant keeper went on up in the lighthouse and when he got up there he found one of the GIs from the airbase had gotten drunk and found his way up to the lighthouse. He had climbed up in the tower, pulling his clothes off as he went up the staircase, and he crawled up inside that light to get warm because this was in November. He grounded that light out and put it out. Why it didn’t kill him, I don’t know. They brought him down and brought him in our house and we fed him breakfast. It was a Monday because I was getting ready to take the girls back to school. Arthur made the man stay there and clean the light up because he had made a pretty good mess up in the lighthouse.”

The Barrs left the lighthouse in 1956 after it was fully automated. Arthur Barr was put in charge of more than 100 aids to navigation strung out along Matagorda Bay, including the lighthouse. He moved

his family to Port O’Connor and worked out of the nearby Coast Guard station until he retired in 1966. The Coast Guard removed the original 120-year-old lens from the tower in 1977 and it is now on display at the Calhoun County Museum in Port Lavaca. Through the efforts of Rhodes and others, the Coast Guard allowed a less powerful light to burn in the tower until the mid-1990s, when it was extinguished altogether.



George Fred Rhodes, chairman of the Calhoun County Historical Commission, looks into the large Fresnel lens from the Matagorda lighthouse. The lens, on loan from the U.S. Coast Guard, is on exhibit in the Calhoun County Museum in Port Lavaca.

Dewey Stringer grew up making frequent fishing trips to Matagorda Island with his father. He fell in love with the area.

“I like it down there, I like the people and that island is kind of a last frontier in Texas in that it is unspoiled, even though they dropped bombs on it and fought wars on it. It is a pristine barrier island,” he says. “I’ve gotten so much out of the area that I’d like to give something back.”

Stringer’s means of giving something back to the area is the Matagorda Island Foundation. He believes the foundation will “provide the glue needed to bond together the tri-government partnership between the USFWS, TPWD and Calhoun County and give them the ability to raise money to support the master operating agreement on the island.”

If the foundation succeeds in raising between \$800,000 and \$1 million, plans call for complete renovation of the lighthouse, a nature trail leading from the state park entrance to the lighthouse and the Gulf

front beach, and a new visitor’s center.

“For nostalgic purposes, I’d also like to turn the light back on,” says Stringer, “but if you turn a lighthouse back on, you have to keep it on.”

Stringer has already pledged \$20,000 to the project and he has challenged the federal, state and Calhoun County governments to pledge \$20,000 each as well. With \$80,000 in seed money, the foundation could apply for a variety of grants to

help with the project. The foundation will also depend on local support in the form of collection boxes placed throughout the Matagorda Bay area.

“A lot of people want to come to the island, yet there are 19 endangered species there, including whooping cranes and horned toads,” Stringer says. “The manner in which we are doing things will really contain the tourists. The idea is that we will create a trail and access to the lighthouse and the Gulf that the people can enjoy and

get around. They aren’t going to get snake bit unless they try to pick one of them up, so they can enjoy the island but at the same time the wildlife is still protected.”

Ruth Barr appreciates anything that preserves the iron giant that seems to be part of her family.

“You would think it was part of the family if you came into my house and saw the number of lighthouse pictures I have sitting around and the miniature lighthouses that people have given us,” she laughs. “Yes, it’s part of our family.”

Even after the Barrs moved to Port O’Connor, they never really left the lighthouse.

“We always looked for it,” she says. “It got to be a habit. You would go to the back door and see if the light was burning. It is an old landmark and has been there for so many years. That was my first home and my home for many years. It will always be home to me, regardless of where I live.”

ARANSAS PASS

Described by those who know him as a very private person, Charles Butt likes to keep a low profile about his personal life. It was Butt and not his grocery store chain who bought the Aransas Pass lighthouse in 1973.

"It was a personal decision for him and he doesn't discuss that decision," says an HEB spokeswoman. "It was something he chose to do."

In keeping with Butt's wishes, that is as much as HEB officials are willing to comment about Butt's ownership of the lighthouse, although Butt has received praise from lighthouse fanciers for his spectacular job of restoring the lighthouse that sits on Harbor Island near the Lydia Ann Channel just north of the city of Port Aransas.

As early as 1947, the federal government acknowledged Aransas Pass' importance as an entry to Corpus Christi and Aransas bays by placing some of the first navigational buoys sent to Texas there. In 1851, Congress approved spending \$12,500 on a lighthouse to mark the entry to the pass.

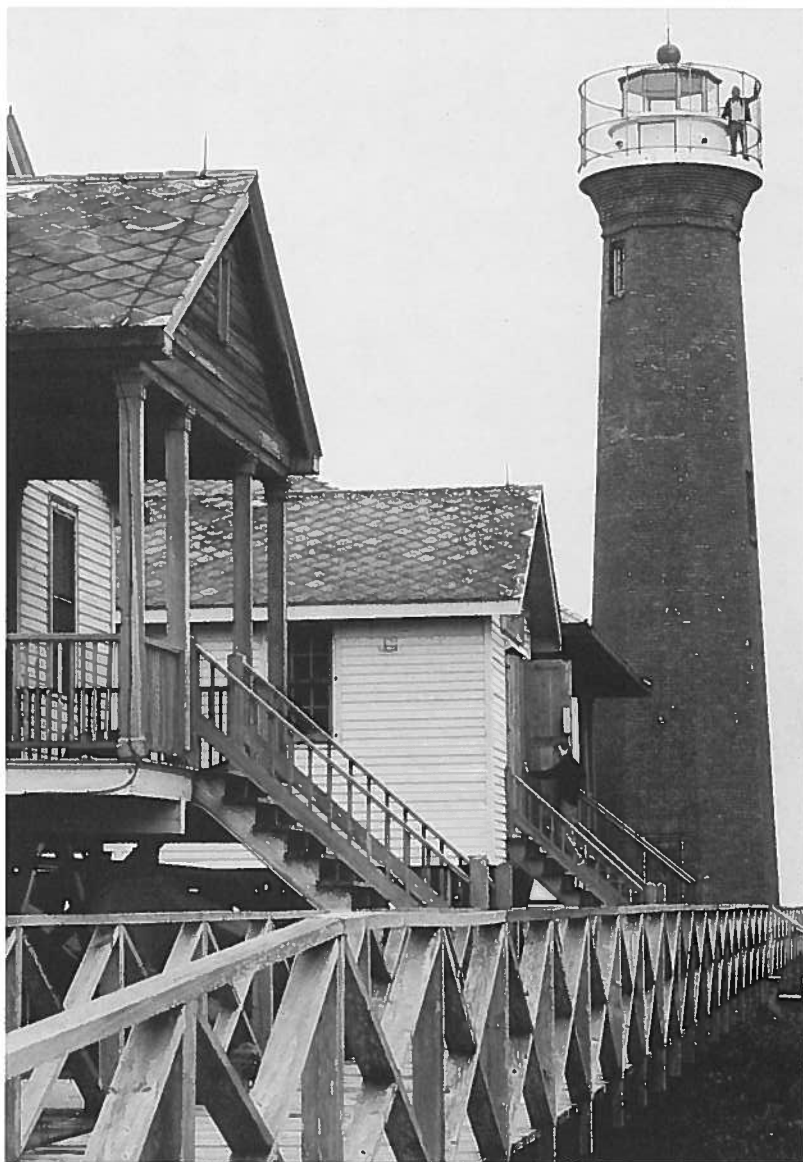
Construction began in 1855 on the brick tower and accompanying keepers' quarters and was finished in 1857. Shortly thereafter, its beacon began sending a beam of light 18 miles into the Gulf of Mexico.

The Civil War darkened the light for a period of years and Confederate troops succeeded in heavily damaging the tower with explosives to keep it out of Union control. For some reason, the Lighthouse Board did not place as much importance on the Aransas pass lighthouse as it did others damaged along the coast during the war. It was the last light repaired, a full two years after the war ended.

As at other remote lighthouses, life for the keepers was a tedious routine of maintaining the light and surrounding structure. That routine was interrupted once in a while by hurricanes, like the ones in 1869, 1875 and 1886. Being in such a remote spot forced the keepers to travel 25 miles by boat to Corpus Christi for supplies or simple human company. That trip was reduced drastically around the turn of the century with the founding of Port Aransas.

Diesel-powered electric generators brought lights, a broadcasting station and a radio beacon to the lighthouse, but it also brought more maintenance work for the keepers.

Nature ultimately brought an end to the lighthouse's usefulness. It had been constructed to mark the entrance to Aransas Pass, but tides and currents in the pass between Mustang and San Jose islands changed the gap between the two islands and



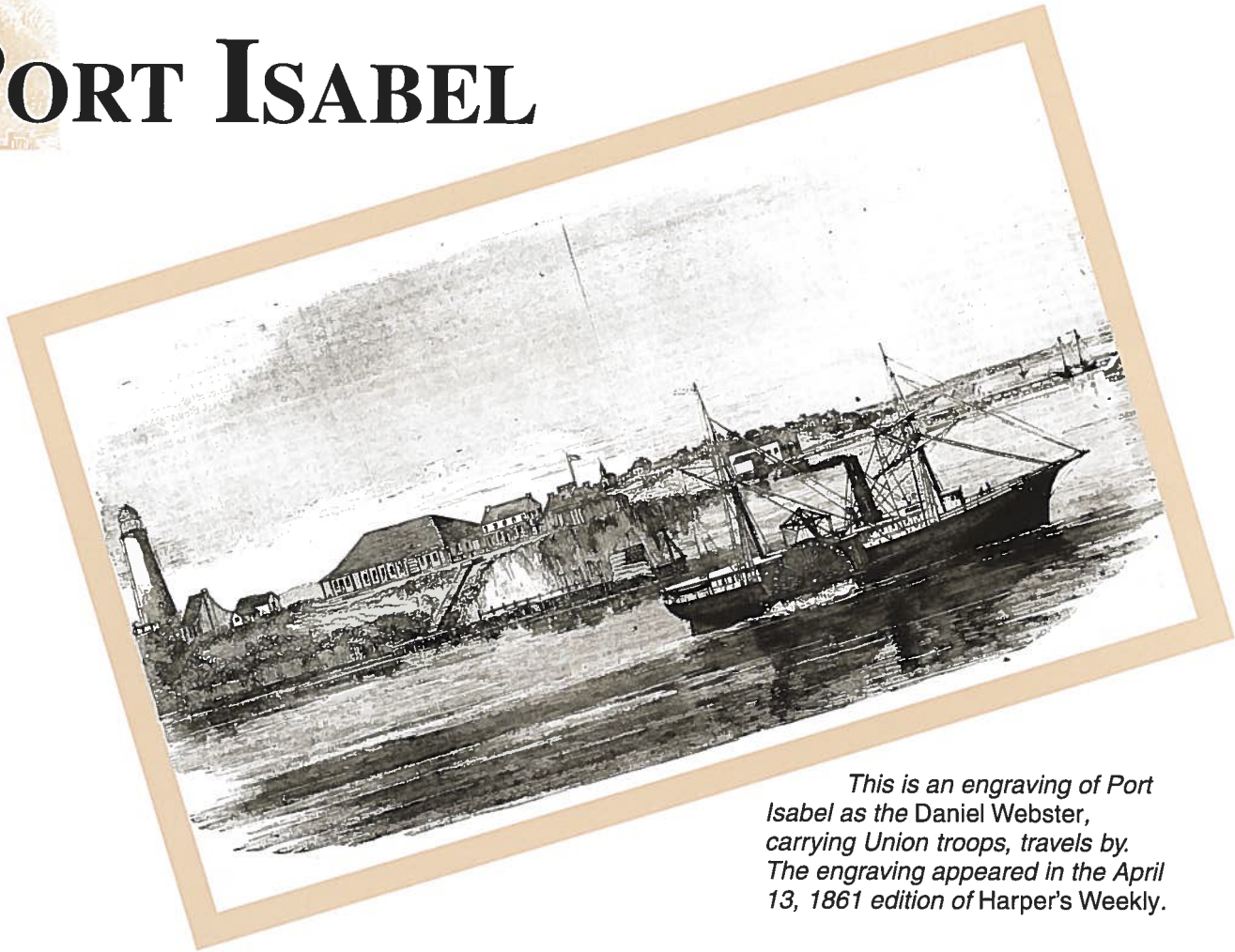
The Aransas Pass lighthouse remains in good condition today due to the restoration efforts of its owner, HEB grocery store chain owner Charles Butt.

thus shifted the position of the pass. By the 1950s the pass had shifted a little more than a mile away from the lighthouse. The Coast Guard erected replacement lights and radio beacons atop steel towers near the town of Port Aransas, thus eliminating any need for the lighthouse.

When no local government wanted the lighthouse, the Coast Guard put it up for sale. It passed through several hands before Butt finally bought it. The lighthouse is now listed on the National Register of Historic Places.



PORT ISABEL



This is an engraving of Port Isabel as the Daniel Webster, carrying Union troops, travels by. The engraving appeared in the April 13, 1861 edition of Harper's Weekly.

Texas' southern most surviving lighthouse is also the only one the state owns. It has been a popular tourist destination since the state took over ownership in the 1950s and it is expected that tourism there will increase after the state completes its nearly \$1 million renovation project later this year.

The 60-foot brick and cement tower sits on a bluff once the site of Fort Polk, an encampment established by Gen. Zachary Taylor in 1846. From there, Taylor waged his war into Mexico. After the war ended, Taylor and his troops left the area and there was little military use for Fort Polk, so the U.S. Treasury Department took ownership of the site for use by the Customs Service.

A federally owned piece of land on the most elevated spot in the area proved a stroke of luck for the Lighthouse Board, which had decided in the early 1850s to place two lighthouses near the Brazos Santiago Pass into Laguna Madre. The bluff known at the time as Point Isabel received a classic lighthouse tower in 1853 while a portable light was placed atop a wheeled base on South Padre Island at the entrance to Brazos Santiago Pass. Ultimately the government constructed a screwpile lighthouse in Brazos Santiago Pass, but that did not happen for another 26 years.

Shortly after Texas left the Union in 1861, the Port Isabel light went dark. Twice during the ensuing three years,

Confederate troops tried to blow up the lighthouse to keep the Union from using it as a lookout post. In each case, the Confederates failed due in large part to their failure to understand the basic laws of physics. They placed kegs of gunpowder inside the tower and set it off but succeeded only in blowing out windows and the towers door.

"The principle is that most of the explosive force is going to go up the tower, it isn't going to blow outward," says Barry Hutcheson, an interpretive planner with TPWD's State Parks Division.

As an interpretive planner, Hutcheson is responsible for researching and developing exhibits and programs at state parks, including Port Isabel. Hutcheson



Thanks to major renovations by the Texas Parks and Wildlife Department, the Port Isabel lighthouse complex looks very much today (below) as it did in 1895 (left).

has been involved with the renovation of the lighthouse. Part of the renovation includes removing the old lantern structure atop the tower and fabricating a new one based on plans from the 1880s. While the lantern was gone, Hutcheson made note of the names of Union soldiers scratched into the soapstone layer at the top of the tower while the soldiers were on duty. The names Hutcheson has been able to read and research trace back to Union forces from Wisconsin and Iowa.

Hutcheson says that when workers removed the bottom floor inside the tower, they found depressions he believes were made by the Confederates' attempted demolitions.

A couple of factors combined to end the lighthouse's use as an aid to navigation around the turn of the century. The newer Brazos Santiago light was better situated to guide ships through the pass and the emergence of railroads between Corpus Christi and the Mexican interior decreased the amount of commercial shipping in the area.

As a result, the Lighthouse Board turned out the Port Isabel light for the last time in 1905.

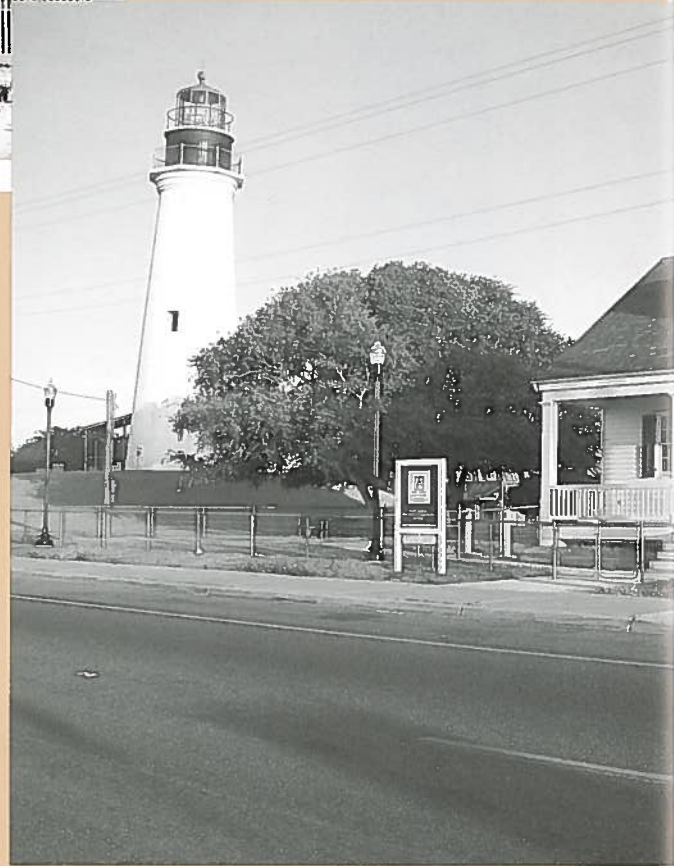
TPWD acquired the site from private owners, Lon C. Hill and the Port Isabel Realty Company, in 1950 and opened it as a park in 1952.

The first phase of the current renovation project called for construction of a visitor's center, the exterior of which is

based on drawings for the original keeper's quarters. That completed, TPWD launched into renovating the tower itself. Beside replacing the old lantern structure, workers are removing the cement and plaster coatings over the brick structure, installing a water barrier over the bricks and then reapplying cement and plaster over the bricks.

Hutcheson admits the renovations are not cheap, but they are definitely worth doing for history's sake.

"This is one of the oldest lighthouses still standing in Texas," he says "It is a site that has a connection with the Civil War and the lighthouse sits on a site that was part of a Mexican War emplacement. The whole area is really a historic region. This lighthouse refers us to the past, where we came from and how we've moved from an oil lamp and a glass lens to global positioning satellite systems."



Interested in helping the Matagorda Island Foundation? Contact any of the current directors:

Dewey Stringer, 713-974-5550 ext. 14.
George Fred Rhodes, 361-552-6342
Calhoun County Judge Arlene Marshall,
 361-553-4600



SEEING THE LIGHT



At one time, dozens of lighthouses stretched from Florida to Brownsville along the Gulf coast. Precious few still remain. It is not a case of not missing something until it is gone because most of the attempts to turn off a lighthouse in Texas met with great public opposition.

Funding considerations outweighed the lighthouses' importance as beacons to the past. Technology has no place for antiquated lights sporting thick beehive lenses and turned by weights and gears.

That, says Rhodes, is a very sad state of affairs.

"I think we owe it to ourselves to preserve our history, and when you preserve history you have to preserve the things that were put on land or water by man if the coming generations are going to understand how things were in the past," he says emphatically. "If you had never seen a lighthouse, you wouldn't believe there was ever any need for a lighthouse.

"I think the children of this time and the children to come should have the opportunity to view things like this. I could tell you that there used to be lighthouses and they had lights in them, but that is not like seeing a lighthouse. That's like telling you that people wear shoes, but that's not like wearing a pair.

"To me, tearing down a lighthouse, or anything else that has had historical significance to the people who developed this country, is like going in an old cemetery and tearing out the tombstones and saying well, these people aren't here anymore and we need that ground for something else. It's like obliterating a cemetery to me if you take away all of the things that these people built and used to get where we are today." ■

During renovations at the Port Isabel lighthouse, workers found the names of a Union soldier who stood watch there etched into the stone at the top of the structure. This one, from a Wisconsin soldier, reads: "G. Henze, Co.E., 20th Regt., Wisc. Vol., Dec. 18, 1863."



If you do not have time to surf all 100,000 lighthouse pages available on the Web, try these sites for starters:

http://www.uscg.mil/hq/g-cp/history/h_Westernrivers.html — A history of Coast Guard operations on the Gulf Coast and the western rivers.

http://www.uscg.mil/hq/g-cp/history/h_lhindex.html — U.S. Coast Guard page on lighthouses, lightships and aids to navigation.

<http://www.lighthousemuseum.org/links.htm> — National Lighthouse Center and Museum's links to lighthouse resources.

http://www.maine.com/lights/www_vl.htm — The WWW Virtual Library: The World's Lighthouses, Lightships & Lifesaving Stations

N O T E S

'A line in the sand' revisited after GLO ruling

A move by the Texas General Land Office (GLO) to seek the removal of homes now deemed to be on public beaches has left homeowners and counties wondering how far homeowners' rights go, even as the new land commissioner revisits his office's interpretation of the Open Beaches Law.

The GLO recommended in May that the attorney general seek the removal of 107 homes the agency says are intruding on the beaches in Galveston and Brazoria counties.

Under the Texas Open Beaches Act, all of Texas' beaches are public, and nothing can interfere with the public's access to these beaches. The law sets the vegetation line as the dividing line between private property and public beaches. Any permanent structure that exists forward of this line is on the public beach and subject to removal by the state.

Most of the state's beaches face high rates of erosion, especially during strong storms. These storms produce tides that can undercut beachfront homes, rendering them wholly or partially on the beach. In the past, even houses that straddled the vegetation line were removed for intruding on the beach.

However, Andrew Neblett, GLO's deputy commissioner for resource management, says this policy is changing.

"In reading the law and discussing this, we (GLO) made the determination that if someone is partially behind the line of vegetation — in other words their house is landward — they could rebuild," he says.

His comments come after Texas Land Commissioner David Dewhurst released an opinion column on May 27 that asked Texas lawmakers to review the Open Beaches Act to ensure it properly balances private property rights with open access to public beaches. He also announced new rules proposed by the land office.

"Besides putting sand on the beach to protect homeowners, the Land Office is proposing new rules which — for the first time — will allow houses that straddle the line of vegetation to be repaired by their owners," he says in the column. "Another proposal will allow geotubes — or vinyl stockings filled with sand — to be placed landward and adjacent to the line of vegetation to fight coastal erosion. Current Land Office rules, which were in effect when I became commissioner, prohibit both initiatives."

Neblett says the office has been looking at the issue to determine what is appropriate under the law — what helps protect the public beach but also helps

protect private property and how do to draw a balance between the two.

A.R. Babe Schwarz, who as a 25-year state senator pushed for coastal resource management initiatives, says the law has always been that the public has a right to its beaches because the beaches are owned by the state.

"The beaches are covered by the ebb and flow of the tide," he says. "People living on the beach can lose their property if their property is eroded. It's the most natural thing in the world."

The 115 or so people whose houses may be on the public beach are not the concern of the state of Texas, he says. The state's primary concern is to preserve the beach for the benefit of the public.

"You're taking away the rights of millions to enhance the rights of a very few," he says. "The homeowner is stuck with the fact that they located on a place that is eroding naturally and will continue to erode naturally."

Schwarz says homeowners are warned about erosion and other coastal hazards when they purchase beachfront property. Their title policy does not guarantee their title to that land, he says. A bill sponsored by State Rep. Patricia Gray (D-Galveston) and recently passed by the Texas Legislature makes this warning even more explicit.

When people assume a risk knowing that the forces of nature are ultimately going to take away a piece of their property, Schwarz says, they don't have any right to expect the government to pay for it.

"There isn't any insurance anyone can buy against erosion," he says. "It's going to happen. It's inevitable. They are doomed to lose their houses unless the beach is constantly replenished on an annual basis."

In addition to the warning about erosion, Gray's bill also provides \$15 million each year to the state to help fight erosion. Some of the tools the state may use to slow erosion include rebuilding sand dunes on beaches, adding sand to beaches to replace that lost to erosion, using plants to hold beach sand in place, and restoring marshes.

Neblett says the land office will work with coastal communities to identify and carry out projects that might slow erosion. The GLO wants to develop a long-term plan in which people can see which projects were selected, why they were selected and how they will be implemented, he says.

"While we don't believe that we will totally elimi-

nate erosion, we believe strongly that with \$15 million annually we should be able to put a dent in it and hopefully draw a line in the sand and stick with it," he says.

One controversial means of slowing erosion has pitted Galveston County against the GLO. This method includes using "geotubes," or large vinyl stockings filled with sand that are placed along the edge of beaches. This method is controversial because, depending on how they are used, geotubes can increase erosion instead of slowing it down, especially in areas adjacent to the geotubes.

"If they're getting hit by wave action, all the data show they will cause scouring," Neblett says. "But, if you're able to place them in such an area where they are not subject to continuous wave action, then hopefully it'll be a non-issue."

Galveston County has announced plans to move forward with plans to install geotubes along a 1-5 mile stretch of beach.

Neblett says the GLO is concerned about the placement of the stockings and that the county combines the geotubes with a plan to continuously add sand to the beach in front of the stockings to protect them from waves. The land office also wants to ensure their placement does not interfere with the public beach, he says.



Even with the geotubes, Schwarz says, Galveston's beachfront property will not be entirely protected. Texas beaches are eroding, and they will continue to do so. While adding sand to beaches and installing dunes may slow the process, ultimately erosion will still occur, he says.

Also, beach renourishment projects are extremely expensive. The state can help fund projects to replenish the public beach in front of the homes, but only in a way that will protect the public's rights to its beaches and not just keep homeowners from losing their property, he says.

"When you put sand in front of somebody's house on a public beach in Texas, you're restoring the public beach," he says. "You're not giving anything to the private property owner. You're restoring a beach for the use and enjoyment of the public."

Of course, he says, homeowners may reap the incidental benefits of beach renourishment projects in front of their homes. And for many, he says, that's enough.

"They don't care why the beach is restored in front of their house," he says. "It's not their objective to restore the beach and then say they own the property again. It's their objective to just simply remain where they are."

—Mark Evans

Study looks at ties between sharks, offshore oil rigs

PORT ARTHUR, Texas — The image of the triangular fin slicing across the ocean's surface can still spark panic among beachgoers, but despite their Hollywood badboy image, some sharks face an uncertain future as some species take their places among the endangered.

By tagging 200 sharks and collecting data on their behavior, fishing guides and clubs in the Port Arthur area hope to shed some light on the importance of oil rigs to these fish and find ways to better protect a fish that is seeing its numbers drop around the world.

Chester Moore, a Port Arthur-area outdoors writer who is leading the Texas A&M Sea Grant-sponsored project, said that by tagging Atlantic sharpnose sharks caught near offshore platforms, researchers may be able to determine how much time sharks spend around oil rigs and whether they return to the same rigs year after year.

"If we could estimate the number of sharks that

use these rigs throughout the season — when they migrate in from deeper Gulf waters — we would have a better understanding of how important these platforms are to sharks," he said.

Moore said sharks may develop territorial ties to these rigs, which could pose conservation concerns in cases when platforms are removed. The study may provide policymakers with the information they need to enhance shark habitat and boost the animal's numbers, he said.

"Right now, sharks are at the forefront of conservation issues simply because of the amount of commercial pressure and bycatch," he said.

Besides gathering scientific data that will be used to determine the range and behavior of sharks, the project will also raise the public's awareness about sharks and conservation, especially along Texas' upper coast, Moore added.

—Mark Evans

M A R I N E

BY MARK EVANS

As hurricane-force winds and blinding rain pounded the 15-story Sunshine Skyway Bridge over Tampa Bay shortly after sunrise on May 9, 1980, a sudden jolt sent eight vehicles and a 1,400-foot section of the bridge plummeting 140 feet into the bay.

The jolt was caused by the 609-foot freighter *Summit Venture* as it rammed into the section of the bridge carrying southbound traffic. The ship was on its way to Tampa to pick up a load of phosphate for delivery to Korea.

Thirty-five people died that day, including 26 people on a Greyhound bus bound for Miami. The National Transportation Safety Board would later fault the ship's pilot and the National Weather Service for the accident.

It was not the first time a ship had run into the bridge. Two months earlier, on Feb. 26, the Greek freighter *Thalassini* hit the bridge when the ship's crew did not lower its 180-foot boom, ripping off a piece of steel from the Sunshine Skyway.

Ten days later, the 720-foot freighter *Jonna Dan* also hit the bridge, knocking out a 20-foot concrete slab from one of the bridge's pilings. The ship's pilot reportedly told the Coast Guard the accident was caused by a combination of wind, water currents and his ship's speed.

In total, at least five ships hit the Sunshine Skyway between 1970 and 1980, according to news reports at the time of the accident.

Ten years later on the morning of June 7, 1990, a small splash three and a half miles northeast of the rebuilt Sunshine Skyway Bridge marked the launch of a program to improve navigation safety and efficiency in Tampa Bay.

To make the nation's waterways safer for navigation as well as prevent disasters like that at Sunshine Skyway, the National Ocean Service, a unit of the National Oceanographic and Atmospheric Administration (NOAA), is installing electronic sensors in the nation's ports to provide up-to-date

weather and water conditions to mariners.

The Physical Oceanographic Real-Time System, or PORTS, consists of a series of sensors that collect up-to-date information on weather conditions, wind speeds, water levels and water current speeds and directions. This information is made available to the public via the Internet or telephone.

Jim Dixon, NOAA PORTS outreach manager, says the Sunshine Skyway accident prompted Congress to ask NOAA to create a system to reduce future accidents in the nation's ports. Since 1990, NOAA has installed PORTS in the New York/New Jersey Harbor, Chesapeake Bay, San Francisco Bay and Galveston Bay.

Dixon says PORTS promotes safe navigation by providing pilots, ships' crews and the public with accurate, real-time information on weather and water conditions so that they can make sound decisions as they navigate the nation's waterways.

All ports using the system report dramatic decreases in the number of accidents since installing PORTS, he says. These accidents include not only those threatening human lives but also those resulting in oil spills, which could threaten sensitive coastal areas.

"It's probably one of the reasons so many ports around the country are vying for it," he says. "PORTS really promotes healthy coastal territories. It makes business good and clean in ports and harbors, making them very attractive places to sail."

Dixon says the system was built by combining information from tide-monitoring stations already in place at each port with information on local weather conditions. The agency also installed current meters, or acoustic Doppler current profilers, which measure the speed of water currents at various levels between the seafloor and the water's surface.

In addition to providing more accurate information to ships' pilots and preventing oil spills, the PORT system also can help clean-up teams better respond when an oil spill does occur, Dixon says. By

using PORTS information on water current speeds and direction in the area, the teams can better predict where the oil will go and set up their equipment to minimize the damage.

"If we've done our job right in the first place, and the users are educated, then hopefully the spills will be prevented," he says. "Now, if a tractor-trailer falls off a bridge, then the local hazardous material response teams can use the data."

In setting up each PORT system, NOAA works in partnership with local agencies, such as port authorities and pilots' associations, to design a system tailored to that port, Dixon says. Each port faces different navigational problems, and NOAA works with local entities to establish each system's requirements.

"In the case of Houston-Galveston, the currents there play a strong role in the way ships navigate," he says. "The currents across the Intracoastal Waterway at Bolivar Roads and Morgan's Point are very strong."

The Houston-Galveston PORTS was set up in 1995.

Cmdr. Alan Bunn, NOAA/National Ocean Service Texas PORTS liaison, says the major rationale for installing PORTS in Galveston was because of the diversity of the Houston Ship Channel's traffic and the need for accurate control depth readings of the channel. Outside the ship channel, Galveston Bay is shallow, and large ships risk grounding.

"We're talking about a very long commercial artery," Bunn says. "That artery is used primarily for commercial activities and shipping. The shipping lane traffic itself is so diverse because you have huge volumes of tankers, large numbers of bulk carriers, increasing numbers of recreational boaters, commercial fishing vessels and cruise ships."

Galveston Bay is susceptible to frequent changes in water level and current because of prevailing winds pushing the tide out or pulling it in, he says. The bay also has many rivers, tributaries and flood-

A D V I S O R

ways feeding into it that can raise and lower its normal tides and currents.

"A lot of those caveats cannot be predicted," he says. "The reality is you just have to call on the system that's there, check with someone who's in that waterway at that moment and have them communicate to you the specific conditions at that very moment. That's what the Physical Oceanographic Real-Time System does. It relays that information at that moment."

Cmdr. Paula Carroll of the U.S. Coast Guard's Houston-Galveston Vessel Traffic Service says her office regularly passes PORTS information about currents and tides on to pilots and crews navigating the ship channel. Large vessels are required to maintain contact with her office while using the channel.

"Routinely, mariners call and ask for that information (on currents, tides and wind)," she says. "They'll call even when they're not on the water in an effort to plan their journey. It's a lifesaver when it's working. As far as we know, it has been a Godsend."

Mariners depend on the information to plan their journeys, she says. When one of the PORTS meters is out, her office gets complaints.

"Because the channel is so narrow, there have been problems forever and there probably will continue to be problems and things you can't avoid, but this has certainly helped to plan instead of to react," she says.

Unlike other bays using the PORT system, 50 percent of the nation's chemical production takes place in the Galveston Bay area. The area also is a hub for many oil refineries.

"The idea behind these PORT systems initially was safe navigation," Bunn says. "What we've also learned though is they're also proving very worthwhile and helpful in marine coast and environment protection because of the ability to plot



PORTS sensors are attached to existing Texas Coastal Ocean Observation Network stations in Galveston Bay.

the currents when there is a spill or release of chemicals into the water."

Resource managers have recognized that a system like PORTS will help them pinpoint when a spill takes place and how the currents affect the spill by providing real-time information on the direction and speed the water is flowing, he says. The system will better allow managers to determine which areas of a bay are safe to leave open for recreation, shipping and fishing after a spill occurs.

In part, because of this ability, Bunn has been working with the Texas General Land Office (GLO) to operate Galveston's PORT system.

LaNell Aston, who is assigned to PORTS in the Texas General Land Office, says the GLO became involved in the PORTS program when the National Ocean Service asked the agency if it could attach PORTS sensors to three of the GLO's Texas Coastal Ocean Observation Network (TCOON) stations in Galveston Bay.

The GLO uses TCOON stations to collect information on factors such as

water levels, air and water temperatures, barometric pressure and wind speed. Aston says TCOON can be used to monitor freshwater inflow, measure beach erosion, assist with dredging activities or establish boundaries of coastal public lands.

The system also can be used in preventing oil spill damage, she says, and this potential is also what made the PORTS program attractive to the GLO.

"The GLO is supporting the effort simply because we think it's a good idea, and we think it might help prevent some accidents in the ship channel and thereby prevent some spills," she says.

Aston says GLO's oil spill division is interested in PORTS because the system can prevent shipping accidents and oil spills by providing the shipping industry and the ports with real-time information about what the water is doing.

Dr. Buzz Martin, state scientific support coordinator for oil spill response in the GLO, says the bays have a lot of potential for oil spills because vessels are passing in close proximity to one another.

"By improving vessel traffic safety, PORTS has the potential to reduce the number of collisions and to warn pilots of unsafe current conditions," he says.

However, the system has yet to be tested in an oil spill situation because Galveston Bay has not had a big oil spill since PORTS was installed. The last big spill in Galveston Bay was in 1996. Fortunately for Galveston Bay, Martin says, most of that oil quickly shot out into the Gulf of Mexico, but it meant PORTS did not get a chance to play a big role in the response.

As an example of the contribution PORTS may make to oil spill cleanup, Martin compares the system to the Texas Automated Buoy System, or TABS, developed by the General Land Office and Texas A&M's Geochemical and Environmental Research Group. TABS is a col-

lection of offshore buoys that measure air surface currents and are designed for oil spill response.

In Galveston Bay's 1996 spill, the oil moved out of the bay and into the Gulf and began spreading up the coast towards Sabine Pass. The GLO was prepared to deploy response crews in that area, he says. But, using information and trajectories gathered from TABS, NOAA and GLO scientists predicted that water currents would reverse and carry the spill back towards the beaches at Galveston. The GLO ordered its crews back to Galveston before they deployed any equipment in Sabine Pass. The currents reversed. TABS was right, he says, and it saved the state at least \$250,000 in cleanup costs. More importantly, he says, it helped focus the response where it was needed to protect coastal resources.

"It's an extremely expensive business to try and clean up a spill, which makes it all the more important to know where exactly to put your resources," he says. "It's expensive if you're putting them in places they don't need to be. Trajectories have helped out in pinpointing where to put your resources so you're not wasting them anywhere. At that cost, you really can't afford to waste anything."

If they had not had TABS at that time, he says, it would have taken them one to two days before they would have been assured that the currents had indeed reversed and that the oil was tracking back towards Galveston.

"We didn't waste time deploying equipment at a site we knew for sure was not going to be hit," he says.

Martin says he sees PORTS making its largest contribution to oil spill response in preventing the accidents that cause oil spills. The system's frequently updated information is important to maintaining safe waterways because accidents can happen quickly, he says.

"The bays are smaller, so things happen faster in a bay and that makes it tougher for a trajectory to make a big contribution," he says. "The spill can make landfall even before you may have been able to turn on a computer, whereas offshore spills tend to drift down the coast over hours, days or even weeks."

In addition to preventing oil spills, Bunn says PORTS can also help recreational boaters plan trips or find fish. Recreational and commercial fishermen rely

There are 5 ways to access the PORTS data information—

1. Telephone Voice Response: (713) 673-1860; (713) 673-5371; (409) 766-1031
2. PC Dial-up modem: (713) 672-9627; setup=9600,8,N,1 login: ports
3. Internet via telnet: telnet ceob.nos.noaa.gov
Open telnet connection to "ceob.nos.noaa.gov" and login: hgports
Once a connection is made to the "ceob.nos.noaa.gov", the latest PORTS information will automatically be displayed on your screen.
4. World Wide Web Text-based Display
Click link to view <ftp://ceob-g30.nos.noaa.gov/pub/ports/hgports/> and
5. PORTS Imaging Component System (PICS)
PICS allows users to click on various buttons to see an array of displays such as predicted vs. observed water level heights, currents, wind vs. water level and current progression from Bolivar Roads through Red Fish Bar up to Morgans Point.
Information reported by the TABS buoys may be accessed via the web site found at <http://www.gerg.tamu.edu/tglo/>.

on information on tides, currents, water depths, water temperature and salinity to determine prime fishing conditions, he says. PORTS offers this information with one phone call.

"Recreational boaters are just beginning to tap into and see the value in checking those systems before they depart," he says.

Before boaters ever leave the harbor, Bunn says, they can contact by phone or Internet several of PORTS stations as well as several of the TABS buoys and get information on wind speed/direction, water temperature and wave height/direction.

"Before that boater launches and takes a chance on whether the conditions are minimal or optimal, they should be able to get a better feel nowadays by utilizing a number of these locations," he says.

Since PORTS was installed in Galveston Bay, NOAA has funded the program. That funding will end on October 1. As a result, the users of the system will have to support the operation and maintenance costs of the system. NOAA will donate the equipment it has in place and continue data quality control, Bunn says.

Currently, the Houston Port Authority (HPA) is taking the lead in working to assemble a team of organizations to fund the program and keep it running.

"It is through these partnerships of industry, academia, federal and state agencies that the PORT systems can improve the efficiency and safety of our maritime commerce while protecting our precious coastal resources," he says.

Reuben Arredondo, marine manager for the Houston Port Authority (HPA) and

retired U.S. Coast Guard commander, says the port authority hopes to have everything in place by August.

PORTS has made a big impact on how pilots and ships maneuver around the Houston Ship Channel, Arredondo says. The system helps pilots know exactly where they stand as they navigate the channel or approach a docking situation.

"PORTS is a technical tool so mariners can make good decisions," he says. "The purpose of the real-time data is so the mariners have on-the-spot information to make decisions correctly. With the PORT system, mariners have accurate information."

The system also gives pilots more confidence in the decisions they make as they approach another vessel in the channel or negotiate a tight turn, he says.

"By knowing the information they need, as far as tides, currents and things like that, pilots can do a better job," Arredondo says.

Dixon says the information offered by PORT system is part of the appeal it has to other ports around the country. Currently, NOAA is in the process of installing the system in Rhode Island's Narragansett Bay. The system also will soon be installed in Delaware Bay, Charleston in South Carolina and Long Beach, Calif.

"PORTS is a program that is burning a hole in the radar screen," Dixon says. "At this time, we have serious inquiries and letters of intent from 36 ports around the country, which is just about every major port in the country. We're paddling as fast as we can go!" ■

P R E S S



Hurricane season is here ... and Texas Sea Grant has four free publications to help you get ready before a storm decides to make landfall.

Begin with **Hurricane!** or **Huracán!** (TAMU-SG-96-503), a 32-page bilingual, magazine-style publication that describes hurricanes, provides definitions of storm-related terms, offers a checklist of what to do when, includes some history of the infamous 1900 storm and has a tracking chart. All information is printed in both English and Spanish, including the directions for using the tracking chart.

A second bilingual publication is **Keys to Hurricane Safety** or **Puntos de Seguridad en Caso de Huracanes** (TAMU-SG-86-501), an 8-page fact sheet that provides step-by-step suggestions of what should be done before, during and after a storm.

Children frequently don't understand what is hap-

pening during a storm watch, or understand the true nature of hurricanes. A 16-page booklet, **Hurricane Warning**, adapted from an earlier National Weather Service publication, provides the explanation via the cartoon character Owlie Skywarn. He tells the story of Hurricane Camille, then offers safety tips and even certifies readers as members of his "Owlie Hurricane Safety Team."

Texas' marinas get equal attention as recreational boatowners get their own tips in **Protecting Your Boat from Severe Weather** (TAMU-SG-84-511). Various mooring options are discussed, tie-downs are diagrammed, and general procedures to process a vessel damage or loss claim are itemized.

Single copies of each are available free by contacting Texas Sea Grant College Program, 1716 Briarcrest, Suite 603, Bryan, TX 77802, (409) 862-3767.

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