Story by Randy Mallory

BEACH BONANZA
on Galveston's Seaside Wonderland

or

SURF'S UP
on Galveston's New Beach

or

FUN IN THE SUN
on Galveston's New Beach

A handful of early risers--mostly solitary beachcombers and young families--stroll in the fringe of the surf as the sun peaks above golden Gulf waters. Work crews tidy up the beach, raking away debris washed up overnight, making ready for the coming wave of sun worshippers. By eight, concessionaires erect rows of lounge chairs and colorful umbrellas, which spring from the glistening sand as if magical mushrooms welcoming Alice to Galveston's new seaside Wonderland.

Three summers ago, the serene scene looked different. Decades of persistent erosion had taken its toll on the city's shoreline. The famed seawall lay largely barren of beach, water lapping all the way to its base in places. A nearly $6 million beach nourishment project in 1994-95, however, turned the tide. The

effort proved the largest earth-moving feat on the island since the rebuilding of Galveston after the great hurricane of 1900.

Using a hydraulic dredge, veteran beach nourishment contractor T.L. James & Co. of New Orleans took 710,000 cubic yards of sand from a borrow site three and a half miles offshore. Crews pumped the sand, mixed with seawater, through a floating pipeline and deposited the slurry ashore from 10th to 61st Streets, creating a new beach 150 feet wide and 3.75 miles long. Funded by Texas Water Development Board bonds (repayable over 15 years by a 1/8-cent city sales tax hike and part of the local hotel-motel tax), the project became the most extensive beach restoration in state history. And, to the delight of locals and visitors, it resuscitated a family tradition of fun in the sun that dates back more than a century.

Now, on a typical summer's day, families fan out across Galveston's sandy, tan-colored beach…picnic baskets, coolers, and sandcastle-building buckets in tow. Parents lounge under shady umbrellas. Children race foamy waves to shore. Teenaged beach-niks fill blue skies with volleyballs, Frisbees, and kites. And older people gather sea shells from the gradually sloping beachfront. Everyone--young or old, active or laid back--gets what they expect from a decent beach: plenty of sunshine, sea breezes, and the relaxing sights and sounds of the surf.

"Build a beach, and they will come," seemed the tourist development justification for the beach bonanza. Bolstered by new laws banning alcohol on the seawall and most city beaches, the plan worked. Officials say surges in tourism resulting from the nourishment project should add $20 million a year to the local economy. **(DPW--EllenWagnon)**

"New shops and restaurants have opened all along the seawall and hotel tax revenues are up," says Wendy Dehnert, executive director of the Galveston

Park Board of Trustees. "On nice summer days, nearly every parking space is taken along the seawall. It wasn't that way before the new beach."

Long-time Galvestonian Vic Maceo, director of beach patrol for the Galveston Co. Sheriff's Dept., agrees: "Historically, the beach was our main attraction. Then came other big tourist draws, like the historic Strand area and Moody Gardens. Now, with our new beach, Galveston is more of a complete destination. There's something for everyone on both sides of the island."

It's even more fun to keep the beach clean. "Before, we were cleaning rocks," says Bob Hickerson, director of the Seaborne Conservation Corps, whose participants (high school drop-outs being trained for maritime careers) adopted the beach as a community service project. "Now the kids take more pride in keeping the beach clean. It's made an incredible difference for everyone in Galveston."

Galveston's re-nourished beach remains a work in progress. That's natural, say TAMUG researchers monitoring the project, because beach sand ebbs and flows as constantly as the tide.

"Nature acts to move sand away from shore," says Dr. Yu-Hwa Wang, professor in the university's Maritime Systems Engineering Department. "Waves break on the beach, stir up the bottom and put sand into suspension. The ocean current then moves the sand and water along the shore or offshore."

"Natural forces which take sand in and out try to reach a balance," explains assistant professor Dr. Jose Vazquez, coordinator of TAMUG's project study. Measurements by Dr. Vazquez show most of the new beach remains basically in equilibrium, with slope, wave energy, and current flow the same as before the replenishment. Currents along this stretch of island tend to move sand eastward, he explains, where it's trapped by the South Jetty, a mile-and-a-half-long rock pier that keeps sand out of Galveston's shipping lanes. The

trapped sand then piles up on East Beach, the island's easternmost tip.

(McComb, p. 57-61, 205; Cartwright, p. 15)

To counter the natural west-to-east transfer of beach, work crews now haul sand during the winter from East Beach and spread it back onto eroding sections of the 51-block-long new beach. "All along, engineers said we'd lose a certain percentage of sand each year," notes the Park Board's Wendy Dehnert. "We expect to put back an average of seven percent (about 50,000 cubic yards) of sand annually to keep the beach nice."

Ironically, maintaining the beach means fighting not only the forces of nature, but also the city's signature shoreline feature--the seawall.

As early as the late 1800s, city leaders worried about beach erosion, David G. McComb writes in his authoritative book, *Galveston: A History* . Early records show a natural loss of 300 feet of beach from 1838 to 1897. **(McComb, p. 205)** The great hurricane of 1900 pushed the beach back another several hundred feet **(McComb, p. 6)** and flooded the island, killing at least 6,000 people. **(Cartwright, p. 5)** (A panoramic, multi-image documentary on that catastrophe shows year-round at Galveston's harborside Pier 21.)

To avert future calamities, in 1902 Galveston began erecting a massive wall 17 feet high. **(Cartwright, p. 15, p. 190)** On the island side of the wall, crews spent six years hauling in an estimated 11 million cubic yards of sand to raise the city's elevation an average of 13 feet. On the Gulf side of the wall at its base, workers dumped four-foot-square granite blocks to keep waves from undermining the structure. **(Cartwright, p. 189-90)** Expanded in the early 1960s to more than 10 miles, the seawall now protects fully one-third of the barrier island.

But how do you protect the seawall and its beach? Over a period of decades, the Army Corps of Engineers drove rows of wooden pilings into the

water at right angles to the shore to slow natural erosion. Later, they replaced the pilings with more durable piers (or groins) of piled granite blocks. Sixteen rock groins, each averaging 300 feet long**,** continue to secure the seawall. **(Maceo)** They also provide impressive ocean views and good fishing for spotted seatrout, redfish, flounder, and other species. But manmade barriers couldn't save the beach entirely. **(McComb, p. 205)**

"The rock groins did slow erosion, but not very well," says TAMUG's Dr. Wang. "The seawall itself induces additional erosion by forcing heavy waves to break with high energy back onto themselves, carrying even more sand out to sea. It's hard to have storm protection and a nice beach, too."

In 1983 Hurricane Alicia pounded that point home when she hit the island and washed away as much as 200 feet of beachfront. **(McComb p. 149)** In the storm's wake, Galveston native and promoter of historic restoration, George P. Mitchell, experimented with beach erosion by adding sand along the seawall at 53rd St. in front of his San Luis Resort and Conference Center. (Another Galveston native, Tilman Fertitta, bought The San Luis last year and spent $12 million refurbishing the complex. Mitchell went on to complete the first phase of restoring another beachfront landmark, the Hotel Galvez at 2024 Seawall Blvd.)

Each new beach experiment brings new lessons. After the most recent nourishment project, the record-setting hurricane season of 1995 and last October's Hurricane Josephine stirred enough high water to carry off much of the new beach. The island, in fact, qualified for federal re-nourishment grants as a "disaster area."

"We learned a lot from Josephine," admits the Park Board's Wendy Dehnert. "We learned that high tides from storms redistribute sand from our new beach out onto sandbars which lie just off the rock groins. Then lower winter tides pushed most of it back onto shore."

Adds Dr. David Schmidly, dean of Texas A&M University at Galveston (TAMUG): "Learning how to maintain the quality of our natural resources is the very thing that will keep visitors coming here. If we make this nourishment project work, we can serve as a model for other coastal cities in Texas."

Throughout the century-long battle of the beach--human engineering versus sea power--the balmy appeal of the Gulf kept pulling visitors to the island.

Vacationers began making beach pilgrimages in a big way during the late 1800s for swimming, horseback riding, fishing, and shell gathering. **(Cartwright, p. 147)** For a time, skinny-dippers challenged public propriety until an 1877 ordinance outlawed bathing unless "clothed in a costume sufficient to cover the body from neck to knee, arms excepted." That same year, rail streetcars began carrying visitors from Galveston's bustling commercial district to the beach, just as they do today. **(McComb p. 62; Cartwright, p. 147)**

To attract tourists in the 1880s, investors hired famed local architect Nicholas J. Clayton to design two beachfront edifices. The Galveston Pavilion at 21st St. and Ave. Q (now the site of Moody Civic Center) sported a 16,000-square-foot dance floor, plus the first electric lights in Texas. **(McComb p. 62; Ray Miller's Galveston p.116)** The wooden structure burned to the sand in 1883 and was replaced with the 200-room Beach Hotel. This flashy mauve-colored showplace featured high-ceilinged verandas, a red and white striped octagonal dome, and a fountain that bubbled freshwater, a luxury at the time. Fireworks, high-wire acts, and bands on the lawn made it a social Mecca. **(McComb p. 64, Cartwright p. 147)**

The beachfront became a Mecca of a different kind during Prohibition when it flowed freely with liquor smuggling and speakeasies. A raucous

gambling trade flourished well into the Fifties, and the island became known as the "Free State of Galveston." **(Cartwright, p. 211-215)**

During that raucous era, the beachfront also inaugurated more reputable pursuits. Each year from 1916 until 1965, a celebration called Splash Day marked the opening of the summer beach season. During one Splash Day in the Forties, Hollywood's Tarzan, Johnny Weissmuller, came ashore as festival king aboard a World War II beach landing craft. **(McComb, p. 180)**

Now when you come ashore in the heart of Galveston, you notice that not only is the beach wider, but the seawall is painted.

The brainchild of beach lifeguard and artist Peter Davis, a colorful mural runs along two and a half miles of the seawall, from 37th to 53rd Sts. Davis and two other local artists, Jane Young and Mike Janota, drew 2,500 images of Gulf flora and fauna for their "See-Wall" project. They transferred the nautical drawings to clear acetate, then spent six weeks on the beach at night projecting and tracing images onto the concrete seawall using a generator-powered overhead projector. It became a massive paint-by-numbers community artwork. During the spring of 1996 several thousand people--volunteers, tourists passing by, and some 90 percent of local school kids--brushed 2,600 gallons of durable paint onto the seawall. The Guinness Book of World Records recently designated the 126,000-square-foot mural as the largest in the world. **(THIS DESIGNATION WON'T OFFICIALLY COME UNTIL SPRING, SO DOUBLE-CHECK TO MAKE SURE THIS ACTUALLY HAPPENS.)**

At sunset, angular shafts of light bathe Galveston's sparkling new beach in an amber glow. Families finish up sandcastles before the tide takes them away. Windsurfers skip across whitecaps. And, one by one, beachcombers begin to marvel as a rainbow spreads across the face of a dark squall blowing in from the Gulf.

A rainbow--the perfect symbol for Galveston's restored shoreline, a place with immutable pulling power. This beach, as historian and author David McComb puts it, "promises renewal. Here on the beach you stand at the edge of the world. Here is the border of the two primary divisions of earth and water. Here you can feel the heartbeat of the planet."

(McComb, p. 18)

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