



Sanctuary on St. Mary's

Pipeline relocation in Houston transforms tiny island into habitat for protected birds

by Bob Kemmy

A sanctuary for protected birds near the heavily industrialized Houston Ship Channel? The notion might be surprising to some, but not to ExxonMobil and regulatory agencies overseeing development in the channel.

Over the last century, expansion of international trade and economic growth transformed the channel area into the nation's third-busiest port. However, along the way, changes beneficial to commerce, such as channel widening, straightening and flood prevention, tended to work against the area's ecology.

Today, with the help of improved

technology, there's increased interest in fostering a balance between economic development and environmental preservation that enhances both areas.

Island of opportunity

A recent case in point involved a plan by the Port of Houston and the U.S. Army Corps of Engineers to widen and deepen the channel. The project required dozens of pipelines crossing the channel to be relocated to a lower depth below the bottom, some by as much as 30 feet, or to be removed. Among them were 39 lines operated by ExxonMobil Pipeline

Company that carried crude oil and petroleum products to hundreds of customers in the Houston area.

With directional drilling technology, laying pipelines beneath waterways has become much more efficient and less environmentally intrusive.

"You drill a hole down far enough below the channel bottom," says ExxonMobil's Dave Beall, project engineer. "Then you drill a hole for the lines



Black skimmers make themselves at home on St. Mary's Island. The new habitat attracted 308 pairs of the protected birds during nesting season.



A tanker makes its way down the Houston Ship Channel past the newly expanded St. Mary's Island.

horizontally under the channel and up to the surface on the other side. The process is now so accurate that we often lift the target stake on the opposite side a mile away right out of the ground when the bit comes up.”

ExxonMobil's Houston Ship Channel project involved the drilling of four 48-inch holes with an average length of nearly a mile and one 36-inch hole that was two-thirds of a mile long. Up to seven new crossing lines were then bundled together and pulled through each hole by a drilling rig with a deadweight lift capacity of 1.5 million pounds.

To facilitate installation and tie-ins of

the new crossings with existing lines, a staging area to permit working above the waterline was developed on St. Mary's Island — a four-acre fluff of sand on the edge of the channel in Scott Bay. But in order to have adequate space, ExxonMobil had to triple the island's size from four acres to 12.

“We initially believed this would significantly complicate permitting with the regulatory agencies, including the U.S. Fish and Wildlife Service and the Corps of Engineers,” says Beall. “After all, tripling the size of an island near one of the country's busiest shipping lanes was a pretty big deal. However, the

agencies didn't see a problem; they saw an opportunity.”

“Channel regulatory agencies share a long-term vision of restoring habitat,” adds Beall. “Accordingly, they saw our proposed enlarged island serving as a perfect sanctuary for ground-nesting birds. The sanctuary would be part of a larger program anchored by wildlife habitat expansion onshore and another island-restoration project in the channel.”

A work in progress

So began a new chapter in the partnership between ExxonMobil and the local regulatory community.

To initiate the habitat side of the pipeline project, ExxonMobil turned to Steve Archer, Texas director of the Wildlife Habitat Council.

“The council’s mission is to help companies maximize the value of their properties as habitat,” says Archer, who will oversee the steps leading to the certification of St. Mary’s Island as a wildlife habitat. “This will be a multiyear project, at the end of which ExxonMobil Pipeline will take over the habitat management of this important natural resource.”

Achieving certification of the island sanctuary means protecting open-sand nesting sites from encroaching vegetation, posting Fish and Wildlife Service signage to restrict unnecessary activity, patrolling for predators such as the occasional coyote or rattlesnake, and making sure there is no freshwater accumulation to attract or sustain predators. Finally, it means conducting bird surveys of nesting pairs in cooperation with the Fish and Wildlife Service.

ExxonMobil designed the island expansion to accommodate the long-term

needs of the ground nesters. It’s about 1,100 x 600 feet at its longest and widest and about 15 feet above water level at its highest. The top is a smooth, gently sloping sand crown surrounded by a ring of natural grasses and small shrubs. The sides are formed by sand-filled fabric tubing and concrete-articulated mats to prevent erosion.

“In addition to the mechanical erosion barriers,” says Archer, “the island will also rely on the protection of natural vegetation. However, the vegetation must be controlled.”

On a recent tour Archer pointed to shoots of grass just appearing in the sand. “These weren’t showing at all two weeks ago. Unchecked, with the area’s year-round growing season, this grass and other plants would cover the whole habitat by the second year.”

Beyond erosion, the other potential problem for the sanctuary is that of predators.

“One snake or coyote can stress the whole colony to the point where they’ll



Concrete-articulated mats were installed to protect the island perimeter from tidal erosion.



The least tern is among four protected coastal birds that have flocked to the new habitat.



Marty Underwood (right) of the Texas Parks and Wildlife Department shares his perspective on the habitat’s success with (from left) Steve Archer, Texas director of the Wildlife Habitat Council, and ExxonMobil Pipeline’s David Beall.

desert their nests and young,” says Phil Glass, senior biologist, U.S. Fish and Wildlife Service. “This island is a unique opportunity to provide an area with a high degree of protection for a group of water birds that have seen their nesting populations in the region reduced.”

Home sweet home

Nobody agrees with that statement more strongly than the ground-nesting birds themselves.

In early 2002, before the island was completed, four rare and severely impacted species arrived and immediately set up housekeeping: 168 pairs of least terns, 74 pairs of Forster’s terns, 308 pairs of black skimmers and, rarest of all, 27 pairs of gull-billed terns.

Island development was immediately

halted. Work resumed once the nesting season had been completed.

The island will be managed primarily for the black skimmers, but the nesting habits of all these species make them compatible neighbors. Least terns start and finish nesting earlier than the others. The Forster’s tern can tolerate greater proximity of grasses near its nests, and the other species can nest in the barren, sandy crown sites.

A living testimony

The picture of the birds sharing the island mirrors the cooperation at the human level.

“I take tremendous satisfaction in the teamwork between ExxonMobil and the regulatory agencies,” Beall says. “It says a lot about what we can ac-



A black skimmer flies away with a fish catch. The first census found that 577 pairs of protected coastal birds nested on St. Mary’s Island last summer.

complish in the future when we work together. The island is also a living testimony to the more than 500 ExxonMobil and contract workers who achieved an outstanding environmental and safety record that included no recordable incidents for 28 months.

One result of that teamwork is already visible.

“We asked ExxonMobil at the start to keep one acre of clear sand for colonial birds,” says Glass. “But seeing how the birds took to the new site, we asked if they could expand the clear-sand area to two acres.”

“Given the success of the birds and the degree of partnering we’ve developed on this project with the Fish and Wildlife Service and other agencies, we couldn’t say no,” says Beall. “Indeed, it was one of the easiest requests I ever had to act on. We’ll have a larger area to maintain, but there will also be more acreage for nesting.”

ExxonMobil Pipeline President Mike Tudor adds that it is gratifying for the company to be part of a project that will help restore populations of these protected coastal bird species to their historical home areas.

“We feel that results such as greater cooperation with the agencies and more protected habitat are real multipliers of our corporate citizenship efforts,” says Tudor. “We will continue to identify other opportunities where we can make a difference.” ■

