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Delta dreams

From scientists to students, residents are working to create a science center and shoreline preserve near Oakley

[Dave Weinstein, Special to The Chronicle](#) Friday, September 12, 2003

Eventually Steve Barbata expects to enjoy opening-day ceremonies for the Delta Science Center at Big Break, a museum and learning environment he's been pushing for seven years, so far without moving an ounce of earth.

But, committed as he is to hearing hammers ring, Barbata is the first to say a museum isn't brick and mortar. It's teaching people about the environment, getting them to care, and helping them get involved. "Who needs another building?" he says, over a seafood torta at La Costa in Oakley, an open-air taqueria where Barbata, a Bay Area museum developer and planner, and scientist John Cain do much of their strategizing and some of their arm-twisting to get the project going.

"Who needs another parking lot? Who needs more gadgets to push and pull, and not learn much?" "If you're not using (the museum) to some end," he asks, "why bother? For me, it's social activism. It's about doing it."

By that reasoning -- although Barbata doesn't say so -- the Delta Science Center, which will be the centerpiece of the Big Break Regional Shoreline, has already accomplished a lot without turning a spadeful of dirt.

Thanks in part to Barbata, Dutch Slough -- 1,200 acres of Delta dairy land that had been slated for homes -- will instead be restored as the largest freshwater tidal marsh in the Delta.

Dutch Slough is just part of what's happening in this once-hidden area of the Delta, in a once-industrial and agricultural area in Oakley in eastern Contra Costa County.

Also under way is the 1,600-acre Big Break Regional Shoreline right next to Dutch Slough. The Delta Science Center will be built at Big Break, which includes 200 acres of dry land.

Dutch Slough and Big Break remain closed, though regional trails pass close by.

A bay that formed in 1928 when floods washed out a levee, Big Break should be open to visitors in a year or two, and ground is expected to be broken for the Science Center around the same time. The first trails should also appear by then at Dutch Slough land, but it will be several years before its marshes are restored.

Although Big Break and Dutch Slough are owned by different agencies -- the East Bay Regional Park District and state Department of Water Resources -- they make up a single ecosystem and will be tied together through trails and waterways.

The result will be miles of trails, opportunities for boating and birding, and exploring a variety of habitats. The science center will have displays, boats for research and nature tours, a pier for canoes and kayaks, classes for Los Medanos College and public schools, and hands-on learning.

"The closest and easiest way for Bay Area folks get to Delta will be Delta Science Center," Barbata says. "People who don't have boats will be able to get to it."

This is among the rarest and most important habitats in the state, Barbata and Cain say, crucial for Bay and Delta fish, migratory birds -- and for 20 million Californians whose drinking water passes through the

Delta. Big Break and Dutch Slough are especially valuable, because shallow water makes excellent habitat for native species.

The properties make up one of the largest remaining marshes in the Delta and still support a rich diversity of wildlife. Once an immense wetland formed by the confluence of the Sacramento and San Joaquin rivers, the Delta was diked into a series of farming islands early in the 20th century.

"You can see a little bit of what the Delta used to be like here," says Cain, a restoration ecologist with Berkeley's Natural Heritage Institute, "and there are not many places you can really see that." "In six years or so," Barbata says, "what could have been really a disaster for the Western Delta has really tipped toward the birds and the fish. "

CalFed, the state-federal program aimed at solving the state's water woes, has committed \$25 million to the Dutch Slough project and the state Coastal Conservancy another \$5 million. Cain says it will cost many millions more to restore the slough and protect Marsh Creek.

It's an ambitious project. But it started small and piecemeal and grew serendipitously.

Audubon Society idea

The Science Center began seven years ago as an idea bounced around by the Mount Diablo Audubon Society and other environmental groups. It was taken up by the park district, Ironhouse, Los Medanos College and several other agencies.

When Barbata was hired as Big Break's director in 1996, the park district had already acquired Big Break to preserve its high-quality habitat, says Nancy Wenninger, the district's land acquisition manager. When Barbata sought a Science Center board member from the "water world," he called the Natural Heritage Institute. He found Cain, as well as an innovative nonprofit that mixed public interest law with hard science, and was helping preserve a delta in Namibia and the Great Lakes Basin in the United States, and trying to persuade Hungary to protect the Danube.

Marsh Creek delta and the western Delta soon became one of the institute's major focuses. Cain came up with a relatively simple project -- a 30-acre restoration on land used by Ironhouse Sanitary District to clean wastewater using natural processes. Ironhouse, which serves Oakley and Bethel Island, helped create the Science Center and owns lands bordering Big Break and Dutch Slough, including Jersey Island.

Cain never won funding for the project, he says, but he did win friends and he got to know the area. And he heard that the families who owned the three 90-year-old dairies that filled Dutch Slough planned to sell their properties in tandem to homebuilders.

Cain hoped to persuade them to do otherwise. And one of the landowners, Stan Emerson, was on the Delta Science board.

Instead of trying to restore 30 acres, Cain was now eyeing 1,200.

"We began to sit down and talk with Stan and his family about options," Cain says. "Maybe there was another way to go. Maybe his property was too valuable for housing. Maybe to the ecology of the Delta it was too important."

Emerson, who says he is not an environmentalist, didn't think much of Cain's proposal. "I thought they were just dreamers," he says. After all, Emerson and his neighbors already had county approval for 4,500 homes on their land.

"But they kept bugging me and bugging me and bothering me and bothering me," Emerson says. "The bottom line was how much would they pay for it."

Emerson was impressed with Cain's argument that the state could come up with cash quicker than developers. And he's glad the land was preserved from development.

"The land would have been covered with houses," Emerson says. "This way you can raise birds and fish and other things."

Cain and Barbata won over the state Department of Water Resources, which agreed to buy Dutch Slough for \$28 million, and CalFed, which provided \$25 million toward the purchase. The California Coastal Conservancy kicked in another \$5 million for the purchase and restoration.

"It was immediately obvious this was a unique opportunity we ought not let pass," says Curt Schmutte, who oversees Delta levees for the department.

But Cain had a hard time convincing Oakley, whose approval was needed to ensure CalFed funding. Cain remembers heading for the first City Council hearing. He knew the then-mayor opposed the plan, fearing that Oakley would lose much of its developable land. Cain was afraid "it was all going to fall apart."

He got to Oakley early and shambled through the marshes. Lightning flashed over Mount Diablo; white caps roiled Big Break. The mayor started the meeting with "a couple of hostile comments on the project," Cain remembers.

"All of a sudden there was a large boom," he says with a laugh, "and the lights went out." Lightning had hit the transformer. The meeting was called off, and Cain and Barbata set to work building community support.

The council was swayed by a later meeting, in September 2000, when more than 200 residents supported open space, and finally backed the proposal 4-1. "I think it's going to turn out to be a great deal for Oakley," says Jeff Huffaker, the current mayor, who walks along Dutch Slough daily. "It's going to turn out to be one of Oakley's identifying features."

Beginning of a dream

All this is just the beginning of Barbata and Cain's dream. Their next goal is to restore Marsh Creek, which feeds Dutch Slough from its headwaters 30 miles upstream near Mount Diablo.

The creek has been turned into a debris-strewn drainage ditch for most of its journey through Brentwood and Oakley.

"If you want to protect Big Break and you want to protect the Delta," Cain says, "you have to pay attention to what's flowing into it."

Restored creek channels will ensure cleaner water by catching pollutants before they enter the Delta. Slower-moving waters with natural vegetation will benefit native flora and fish.

But the challenges are daunting. Brentwood and Oakley are two of the fastest-growing cities in the state, with subdivisions and shopping centers rapidly closing in on the creek.

But much creekside land remains undeveloped, and Cain hopes to preserve it within at least a 200-foot natural corridor. This requires planning changes, land acquisition or easements -- and lots of money. "There is a window of opportunity right now," Barbata says, "and it's not going to be here long." Brentwood likes the concept, says City Manager John Stevenson. The city has adopted a Natural Heritage Institute plan for creek protection, and is working with developers to preserve creekside habitat. "It's certainly a model for what we want to do," he says, "and at the locations where it's appropriate we're going to push to do similar things."

When the city created a natural-style waterfall where sanitized water enters the creek at a sewage plant, he says, "the salmon came up there immediately."

Oakley is also working with the institute to preserve land along the creek, Huffaker says.

Restoring the Slough and Creek will involve students and other volunteers, Barbata says. A regional trail will let people watch the work as it proceeds, and people can join in. "With shovels," he says. "Driving bulldozers."

"Citizen monitoring," Cain adds

"You look at all this land," Cain says, standing on the regional trail overlooking Dutch Slough. "You think, 'This is flat. It looks like normal agricultural rural open space. It isn't as beautiful as Yosemite or East Bay Parklands.' But from a wildlife diversity standpoint, it blows those places away."

"I've been out here with good birders, and they can do 60 species in 60 minutes."

Barbata remembers taking a state Fish and Game official to an Oakley highway bridge over a debris-strewn stretch of Marsh Creek. A new subdivision is built to within 15 feet of the creek bank and hidden behind a wall.

"I said, 'Two weeks ago I saw a salmon right there.' The guy goes, 'No way!' Literally as I said it this huge fish comes up out of the water."

"The otters come up in here; the beavers come up in here; the muskrats come up in here; there are bass all over here," he says, leading a tour along a stretch of the Marsh Creek Regional Trail.

"And there are a lot of kids who come down to play here in the creek," Cain adds. "But what the developers do is, they fence off the creek."

"You can live next door to the creek but you turn the back to the creek. It becomes this illicit place where dirty things happen and pollution and mosquitoes -- instead of orienting homes to the creek so the creek becomes an amenity."

Farther along the trail, at Dutch Slough, Marsh Creek is a trapezoidal ditch as straight as the nearby Contra Costa Canal.

Cain envisions its future -- split into three or more winding channels, shaded by sycamores, cottonwoods, valley oaks, "perhaps a marsh plain with duck ponds on it, and as we take our kayaks down the channels it will be like a new delta for Marsh Creek."

More than a restoration, Cain says, Dutch Slough is an experiment to determine how best to restore other wetlands.

"Why are the native fish declining and how do we get them to come back? What kind of habitat attributes do they like? We don't even know where Delta smelt spawn, for instance," he says. "Is it shallow water, is it deep water? Is it sandy? Is it vegetated? Is it marshes?"

Barbata's form of activism doesn't involve marching with banners, but building coalitions and managing projects. He helped create the Coyote Point Museum for Environmental Education in San Mateo and developed natural sciences galleries at the Oakland Museum. He is highly regarded by museum professionals for supervising the Lindsay Wildlife Museum as it moved to a larger home in Walnut Creek, says Tom Steller, the Oakland Museum's chief curator of science.

Changing attitudes

A ruddy, red-haired man, Barbata, 52, lives in a rare spot of rural land in Walnut Creek. He recently spent a week with friends putt-putting in a boat on the Sacramento River from Redding to Rio Vista. Barbata says some locals call him a hippie.

But he's gotten to know the Delta's denizens well and worries that the new suburbanites haven't a clue about the region's riches.

That's why the Delta Science Center is working with many locals, including students from Los Medanos and several high schools who have monitored wildlife and checked water quality.

Leyla Sezen, who graduated from Oakley's Freedom High in June and plans to major in marine biology at UC Santa Cruz, checked the water of Marsh Creek for chlorine and ammonia as a class project. She was entranced with the salmon fingerlings swimming by, and encouraged by not detecting chlorine.

But she's amazed at how little some students know or care about the creek.

She blames that on appearances. "It's just a place where everything gets dumped. People go crawdadding. There's always trash and it's green and murky- looking. It doesn't look like a place you'd like to hang out."

Barbata hopes to change that attitude.

"If the people who live here get behind it, the schools take it on as a project," he says, "they will have created their own Golden Gate Bridge in their own backyard and they'll be able to say, 'I did it.' "And they'll say, 'You should have seen what it looked like -- it was a ditch with garbage and old chairs, and now's it's beautiful.' "

CHECKING OUT THE DELTA

The Marsh Creek Regional Trail, which goes through Brentwood, Knightsen and Oakley, provides views of Dutch Slough just north of the Contra Costa Canal. The Dutch Slough property is to the east. For information, call the East Bay Regional Park District, (510) 562-7275. Within the next year, access to the Delta will increase thanks to:

Big Break Regional Shoreline, a 1,600-acre (most of it underwater) East Bay Regional Park set to open within two years. The park will have nature programs, an observation tower, a pier and water access for canoes and kayaks.

The Delta Science Center at Big Break. This museum and learning center hopes to break ground in 2004. It will be at Big Break. When completed it will offer exhibits, nature programs, a chance to interact with scientists, boat tours of Big Break, and classes associated with Los Medanos College, Cal State Hayward and other schools. (925) 947-1473, DSCatBB@aol.com.

Dutch Slough. This 1,200-acre marsh project, owned by the state Department of Water Resources, is adjacent to Big Break. Trails should open on portions of the site within a year. When completed over the next several years, Dutch Slough will offer opportunities for birding, paddling, and nature programs in a restored marsh. It will also provide opportunities to learn about restoration and to help make it happen. For information call the Natural Heritage Institute, (510) 644-2900.

An Oakley city park. Also related to the Dutch Slough project, Oakley will construct a 55-acre park with active recreation, historic buildings, and access to Dutch Slough. No opening date has been set.

-- Dave Weinstein