

Bay has few links to ocean: Answer is flowing in the wind

By Kirk Moore, Staff Writer Asbury Park Press — Monday, April 25, 2005

Barnegat Bay is a placid and forgiving place for boaters, a shallow 42-mile lagoon that shields them from the power of the North Atlantic. But some observers—fishermen, naturalists and others immersed in the bay's watery ways—say the bay's sandy barriers create another problem, like a sink with a drain that's too small.

That distance between the bay's links to the ocean—Manasquan Inlet via the Point Pleasant Canal at the north end, Barnegat Inlet in the middle, and Little Egg Inlet to the south—is a major factor in keeping the rate of bay water turnover at nearly two months on average, scientists say.

A generation ago, a movement was afoot to open a new outlet—a man-made inlet between the bay and ocean across Island Beach State Park. The idea first surfaced in 1957 among a committee of Ocean County political and business leaders looking at the bay's pollution problems. One committee member, Berkeley businessman Earl R. Neff, kept promoting the idea for years as a cure for the bay's pollution and a boon to the recreational boating industry.

By 1967, the newly formed Barnegat Waterways Improvement Association was touting the idea for a 1,200-foot long channel through Island Beach, a former private estate that had been acquired by New Jersey's parks division in the 1950s.

In 1971, conservationists and inlet advocates were clashing over the state's plans for developing the park, which at one point included a proposal for building a state marina. A public hearing at Ocean County College attracted 600 people to debate the inlet idea. Talk of an inlet—or alternatively, a piped flume under Island Beach to aid the bay's tidal flushing—sputtered on and off through the 1970s.

In the meantime, Ocean County took advantage of the federal Clean Water Act to obtain millions of dollars for the Ocean County Utilities Authority, building a regional sewage system to replace old municipal treatment plants and home septic systems that had fouled the bay.

After the inlet issue had passed, the Army Corps of Engineers worked to fix navigation problems at Barnegat Inlet, ultimately completing a new south jetty in the early 1990s that moderated the inlet's infamous shifting sandbars.

Today, there's little chance of New Jersey's most popular state park being truncated; thousands of daily visitors swim at Island Beach in the summer, and fishermen, kayakers and birdwatchers use the park year-round. But the possibility of new tidal flushing being introduced, whether by nature during a storm or people with dredging, continues to provoke speculation.

It strikes a chord with Gef Flimlin, a marine agent with the Rutgers Cooperative Research and Extension Service. He started working with Barnegat clammers and fishermen in 1978. "I really believe that if the whole circulation thing was fixed, it would help the bay a lot," Flimlin said. He

and local clammers point to Little Egg Harbor Bay, at the southern end of the estuary, where big clam beds were harvested into the late 1980s.

By 2001, native clam stocks were a third of what they had been, and hundreds of acres of bay bottom are covered by silty mud.

Baymen wonder if the bay might be improved if and when a big storm opens a new inlet across the uninhabited southern tip of Long Beach Island, which is managed as a wildlife preserve for shorebirds as part of the Forsythe National Wildlife Refuge. Inlet breakthroughs there have happened in centuries past, coastal geologists say.

A full tidal exchange of water in Barnegat Bay takes "on average 50 days," said Qizhong Guo, an associate professor of civil and environmental engineering at Rutgers University who studies the bay's tidal flows. "It's shorter in January, because there's more wind (in winter). In the summer, it's even longer."

Barnegat Inlet is the major source for tidal exchange in the central bay, but it's not as if bay water simply surges on an outgoing tide to be replaced by incoming ocean water, Guo explained. In fact, up to 80 percent of the bay water on an ebb or outgoing tide may linger around the inlet, to be drawn back on the following flood tide, he said. The flow changed with the Army Corps of Engineers reconstruction of Barnegat Inlet, with slightly higher salinity and tidal ranges seen inside the bay, Guo said.

Even if a big storm were to open new inlets—as the great March 1962 northeast gale did to Long Beach Island—it's likely any breaches would soon be filled to protect roads and other structures. The most likely place for a permanent breakthrough could be the undeveloped Holgate unit of the Forsythe refuge.

Even if that happens, it would not dramatically affect the tidal flow for the northern reaches of the bay, Guo thinks. "The Route 72 bridge is where it divides between Little Egg Harbor and Barnegat Bay. There is some exchange between them. That exchange has less impact on Barnegat Bay because we have that big Barnegat Inlet water coming in," Guo said.

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after the inlet issue had passed, but says tidal patterns in the bay may be part of its ecological problems today.

"I really believe that if the whole circulation thing was fixed, it would help the bay a lot," Flimlin said. He and local clammers point to Little Egg Harbor Bay, at the southern end of the estuary, where big clam beds were harvested into the late 1980s.

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