

VILLAGE VIEW

ANDREA
LEONARD

At the recent Osterville Village Association meeting, a recommendation that one-acre zoning be adopted in Osterville received wholehearted support. When the proposal comes before town meeting, it is hoped that town meeting members will recognize the importance of approving this zoning regulation.

Not only is one-acre zoning important to retaining "charm" in residential sections of the village but of far greater moment is protection of pure water. While arguments relating to increased costs of home-ownership are considerations we all have obligations to address, of special import is the acknowledged fact that a given amount of land can support only a certain number of families without endangering its water quality.

Whenever any Cape community places land-use restrictions on property, restrictions to limit water use and population, restrictions to preserve water recharge areas, every Cape Cod community benefits. All of us who live or visit here draw from the single aquifer underlying our sandy soil. Unfortunately, the Town of Dennis this summer failed in its attempt to impose similar zoning restrictions throughout that town.

Another recommendation made at the Osterville Village Association meeting may not be so wise, despite costs involved and the paucity of funds to take alternative measures. The Osterville Village Association's directors have been asked to act at their next meeting on the recommendation to request the Barnstable Waterways Committee to extend the west breakwater on Dead Neck another 100 feet into the sound to prevent sand wasting from Dead Neck from drifting into the entrance channel of West Bay.

Before this recommendation is acted upon, consideration should be given to the long-term effect of continuing to lengthen the breakwater in question.

Studies show that jetties, groins, and breakwaters built to prevent drifting sands from clogging channels do, indeed, trap sand on the up-current side of the construction. Studies also show that interfering with natural drifts of sand along the shore has negative effects on down-current beaches, and that when the normal movement of sand, carried by offshore currents, is inhibited, the down-current beaches erode rapidly.

Oceanographic experts throughout this country attest to the long-term inefficacy of obstructing the natural flow of currents that move alongshore. At the Cape Cod National Seashore headquarters building, in Eastham, a film can be viewed that clearly demonstrates the problems encountered at Santa Barbara, California, resulting from construction of breakwaters there.

Famous beaches of Florida's east coast have been ruined by efforts designed to protect them or to keep channels open: jetties, groins, and breakwaters. Whatever the costs involved in channel-dredging, experience on every coastal area indicates that extension of breakwaters is but a short-term expedient and one that ultimately destroys valuable down-stream properties.

Shoreline currents on the Cape's south-facing beaches flow from west to east. These currents are called littoral drift. They carry sand from Falmouth and Mashpee beaches to Wianno and then further along to Long Beach and Craigville, and on to Yarmouth and Dennis, depositing it in a continuous "feeding" operation, as long as man does not interfere with their natural movements.

When West Bay Cut was made at the turn of the last century, natural forces went to work immediately, attempting to mend the breach and close the new channel. Those forces are still trying to achieve that. Over the years, efforts on the part of engineers to keep the channel open have changed the beach front the entire length of Wianno.

Fifty years ago the beaches at the extreme western end of Sea View Avenue were wider, and the beachfront opposite the head of the inlet we call Eel River was shallower than today. Over the years, as the jetties at West Bay Cut have been

extended into the Sound, sands that normally would have fed the beaches immediately east of the cut have been trapped behind the breakwater west of the cut, enlarging Dead Neck island.

Dredging operations in earlier decades pumped sand from the channel onto Dead Neck rather than onto the easterly beaches, compounding the problem. Easterly beaches, deprived of feedings formerly delivered by littoral drift, eroded.

The beach opposite the head of Eel River, however, grows wider because, here, a natural curve to the land occurs. And here, rather than nearer the cut, the current, after being deflected by the jetties, swings back to its natural path, and as it does so, deposits tons of sand at the curve, building that part of the beach to twice its width as compared with half a century ago.

And that curve, in turn, has deflected deposits of sand further east, resulting in narrowing beaches along Sea View Avenue frontage, east of Eel River. At the head of Wianno Avenue, the beach curves once again, and the current, several hundred yards further east, encounters still another breakwater, this time at East Bay Cut.

Littoral drift, deflected once more, leaves its trillions of grains of sand in the curve of Dowses' Beach, building its width, year after year, and at the same time, starving Long Beach on the easterly side of East Bay Cut of natural replenishment.

While it is undeniable that keeping West Bay Cut's channel open to accommodate the increased boating enjoyed by residents and visitors to Osterville is important, protecting beaches from avoidable erosion is also vital to this area's continued economic well being.

Costs to rebuild miles and miles of Florida's coastline, ruined by ill-advised construction of breakwaters installed to keep channels open or prevent the natural movement of sand along the shore, run into billions of dollars now that engineers are recognizing the forces involved and how those forces operate to maintain a steady flow of sand along the coast.

Powerful storms, winter storms roaring down from Labrador on northeasters or out of Hudson Bay carrying northwest gales, and hurricanes boiling up the coast from the Caribbean, only exacerbate the normally imperceptible but constant flows and currents.

A better way to maintain channel depths in West Bay Cut, a way that may well prove a savings over the long term, may be spending whatever funds are required for dredging, combined with depositing dredged material on the beach east of the cut where it would have been carried naturally had not the cut been made and jetties installed in the first place.

Property owners with waterfront homes on Wianno Beach may wish to make their positions known to directors of the Osterville Village Association, now charged with requesting Barnstable's Waterways Committee to add another 100 feet of length to West Bay Cut's breakwater.

LETTERS...

Can't afford to lose Dead Neck

I have read with great interest the excellent and informative article in Village View of September 15th concerning extending the West Breakwater at West Bay Cut.

While agreeing 100% that the littoral drift of sand is from West to East, the purpose of extending the Breakwater would be to help entrap the sand that is pumped up on Dead Neck from dredging operations. The erosion on the outside beach on Sampson's Island and Dead Neck is severe and if something isn't done to help hold the sand, a severe storm could break through (as it did in the 1954 hurricane).

The example of what happened at Popponesett with the break through in 1954, and the complete loss of the long land split should make us well aware of what could happen to Dead Neck. Needless to say, the loss of Dead Neck would have disastrous results to our whole harbor complex and make the South side of Oyster Harbors an outside beach.

I suggest that persons interested in this area view first hand how narrow the island is two hundred to three hundred yards to the West of the Cut. Dredging of West Bay Entrance is planned for this Fall and will greatly protect this area.

The decision to extend the Breakwater one hundred feet is certainly up to engineering experts, but an extension, in my view, is very necessary. To pump future material to the East of the Cut would be disastrous to Dead Neck.

Sincerely,
Chet Crosby, Jr.