

News Flash from Lagoon Point

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Dredging update

We continue to look into whether we can dispose of our dredging spoils by using 'beach nourishment.'

With 'beach nourishment' the sediment from our dredging would be used to rebuild the eroded beaches along Oceanside Drive, that is, the west-facing beach properties along Admiralty Inlet along the southerly half of Lagoon Point. This is a win-win option we think. The South Beach property owners could have their eroded beaches rebuilt at community expense, and the dredging project could avoid the technical difficulties and high costs of barging out the dredge spoils and dumping the spoils somewhere in mid-Admiralty Inlet. Why dump the spoils if Lagoon Point property owners could use them?

To do beach nourishment we would need the permissions of every South Beachfront property owner. We have now had discussions with about half the 23 Division-2 South Beach property owners. (If these meetings are successful we would next invite in also the 16 Division-1 South Beach property owners.)

In these discussions we explain the beach nourishment option and ask the beachfront owners whether they would be agreeable to having their beaches rebuilt (at no expense to them) using the sediment dredged from our silting basin. Below is a summary of the information we are providing the property owners. (See FAQ - Frequently Asked Questions.)

Reaction of the Division-2 property owners has been mixed so far. Over the next several months we intend to continue these discussions. If you are a South Beach property owner we urge you to come to one of our future meetings (not yet scheduled) and look into this option of having your beach rebuilt at our expense.

It will take some time yet to fully explore the beach nourishment option with the South Beach property owners, To avoid further delay we will begin applying for dredging permits this fall, specifying that we would use open-water disposal for our dredge spoils. We are advised that since beach nourishment is ecologically advantageous and preferred by the permitters we could later switch our permit applications to that method without penalty.

FAQs - Frequently Asked Questions - about proposed beach nourishment at Lagoon Point

What is 'beach nourishment'?

Beach nourishment is the rebuilding of an eroded beach by adding new material onto the beach. The new material, sand, gravel, rocks, cobblestone, etc., whatever is available (and not contaminated), is usually barged in or gotten locally, typically from a dredging project, which is what we are considering at Lagoon Point.

Why do beach nourishment at Lagoon Point?

The half-mile long beach south of the jetties has considerably eroded over the years. Rebuilding the beach would add years of useful life. A rebuilt beach would protect those owners' exposed bulkheads and keep damaging waves further away from upland properties. Every South Beach property owner would benefit.

Beach nourishment is also ecologically beneficial as it improves marine habitats. It is therefore favored by environmentalists and permitters, and benefits us all.

Where does the dredging project fit in?

As you know, we are preparing to dredge the considerable sediment that over the years has come in and settled in our central basin and at the mouths of the East and West Canals. That sediment mainly originates on the beaches and cliffs generally to our north, and is moved along the beach by waves and the alongshore current. At every incoming tide, seawater carries the material into our basin. As the incoming current slows, much of the material settles to the bottom, and does not leave with the outgoing tide.

Over the last 35+ years this sediment has gradually built up in the central basin and at the mouths of the two canals. Other than for a small dredge in 1994, the basin and canals have never been dredged. Ordinarily we would barge the dredged material out and dump it at an approved open-water location in Admiralty Inlet. We have tested samples of our sediment; it is free of contaminants and we can do open-water disposal.

But it seems wasteful to dump the dredge sediment out in Admiralty Inlet when our own South Beach property owners could use that material to rebuild their eroded beaches. And since the dredging project is already funded we could do the beach nourishment at no permitting burden or work cost to the South Beach lot owners. So we thought we'd ask the South Beach lot owners if they were interested in having their beaches rebuilt.

What are the advantages for South Beach property owners?

There are considerable advantages to beach nourishment, and every South Beach lot owner would benefit. Most important, owners' bulkheads would be far better protected than they are today. The bulkheads have been put there to protect their upland properties, but bulkheads can fail, especially as the foundations wash out. When foundations wash out the exposed bulkheads can topple (if rock), or tip or fall over (if concrete or wood). Exposed bulkheads are also vulnerable to physical damage by storm waves and by wave- and wind-driven snags, timbers and other debris that wash ashore and pound the bulkheads, cracking them or loosening the foundations.

A built-up beach would also keep heavy waves further away from properties, generally reducing what damage those waves could cause to upland land and structures. Some waves would still run up the beach, especially at high tides, but the raised beach would slow those waves by absorbing much of their energy, again reducing potential damage to upland properties. A built-up beach provides no absolute guarantee, however, no assurance that upland storm damage will never occur. Damage could still happen, especially during a severe windstorm at high tide.)

And a built up beach would give owners more beach to use. In effect, the the erosion clock would be set back (though erosion would continue to occur). The number of years of use so gained is impossible to estimate.

Of these advantages, protecting bulkheads is especially important. As the South Beach erodes further, bulkheads will come at greater risk of failing, and in time every bulkhead is liable to need repair or rebuilding. This repair or rebuilding is increasingly difficult to permit, and very expensive and likely to get even more expensive. By rebuilding the beach, the expense of bulkhead repair can likely be put off for some years. But again, this is no assurance that beach nourishment will protect every bulkhead and every upland property against all wear and damage.

How much sediment would you put on the South Beach? What would the filled beach look like?

Our geologist, Jim Johannessen, estimates that our dredge project would generate around 17-21,000 cubic yards of material. From his survey of the South Beach Jim estimates the beach could take up to 19,000 cubic yards (and maybe a bit more), in other words, sufficient to handle our dredge project. Jim Johannessen and our engineering (subcontract) consultant, Robb Webb, are both experienced in beach nourishment projects, and both have recommended we consider beach nourishment.

We would have sufficient dredged sediment to fill back the entire South Beach, starting a bit south of the south jetty wall and from there going southward to the southern end of Lagoon Point. The beach fill would look somewhat like a long shallow wedge. The fill would be highest at the bulkheads, covering the bulkheads almost to their tops. As one moved from the bulkheads toward the water's edge the fill would taper down, and would

end entirely at the mean low tide line (0 ft MLLW). Bulkheads would be mostly buried, better protected for years against damage.

After a few months of tides, currents and rain, the built-up beach would likely come to look something like our North Beach. After all, the sediment we're dredging out came mainly from the beaches north of us. But the dredge sediment contains a higher proportion of smaller material than you see today on the surface of North Beach.

The final appearance will emerge gradually, after the initial dredged sediment is washed and washed again by the tides, currents and rain. Initially the beach will have a fair amount of fine-grain material, and at first it will be dark in color and smelly as it contains organic material. The fine material and organics will wash away fairly soon, we're told. As the lighter sand washes away, after several years the South Beach should look more like the North Beach today.

The rebuilt beach will not look like the sediment sitting at the bottom of our main basin, except for the first few weeks or months. Much of that dark organic material will wash away fairly quickly, we're told.

To see what a rebuilt beach looks like you could walk the North Beach (You might also visit the outer (west) shore of the Sandy Hook community at the southern tip of Whidbey. There you can see how beach nourishment has buried and protected bulkheads, and what the final beach composition and color are. That dredging was done in 2004. If you go, you can walk across the community lot to the left as you reach the bottom of the Sandy Hook Drive hill. Please do not trespass on private lots.)

How would this beach nourishment be done?

A hydraulic dredge using a submerged cutter head would cut into the sediment and suck it into a pump which would then pump the sediment slurry through a rather large-diameter flexible pipe laid along the beach. Workers at the outlet end of the pipe would move it back and forth to deposit the sediment along the intended area. Water would drain away, leaving the sediment deposited on the beach. Temporary barriers would likely be put down to keep the liquified sediment from running off too quickly.

When would beach nourishment be done, and how long would the work take?

The allowed work window is generally from mid-July to mid-February. We would try to schedule the work for mid-September or later, but the dredger's work schedule and the tide table will dictate when our project will be done.

We've been told the work might take 2-4 weeks, 5 maybe.

Now for the inconveniences: For how long would we not be able to use our beaches?

Most of the beach would likely be walkable after a few days of high tides. A bulldozer may be used to level the beach and pack the sediment. Over the following days and weeks the tides and accompanying current would wash away the finest particles, settle the remaining sediment and further firm the surface. The uppermost part, above the mean high tide line, might firm up more slowly since some high tides may not reach that high up the beach.

What about odor? Would there be a bad odor, and for how long?

Yes, there will be a bad odor, but for a relatively short period of time, we're told. The lab tests of our sediment samples indicate we do have some organic material (which is why the sediment is dark in color). The samples did smell bad when first taken out of the water and exposed to air.

The organic material and the accompanying bad odor should gradually dissipate as the beach is washed by tides and waves, and with rain. We're told the odor could last several weeks, perhaps even two months or so, but possibly less, since ours is a fairly high energy beach (we get relatively heavy waves). The rate at which the odor dissipates would also depend on how high the high tides run in the weeks immediately following the work. A few days of heavy rain would help wash away the fine-grain material and organics. The color, initially dark grey or black, would fade over time as the organics wash out, and the silt that remains may end up a color like clay.

Because there are so many variables and unknowns, we cannot assure a closer time estimate. Some of the odor may persist possibly up to two months, possibly longer, though we are advised it will likely dissipate more quickly.

How much would this beach nourishment save Lagoon Point ?

Beach nourishment would reduce the cost of the dredging project. It is considerably less costly to dispose of our dredge sediment by beach nourishment rather than by open-water disposal. The amount of savings is impossible to estimate since many factors enter into dredge firms' actual bids, and the actual bids are still two years off. Savings could be \$100,000 or more.

Saving money is not our main motive for offering to do the beach nourishment. We are proposing beach nourishment because it seems unwise for us to dump our dredge sediment in open water without first asking our owner-neighbors on the South Beach whether they would rather we used the sediment to rebuild their eroded beaches, and at no cost to the owners. Since this beach nourishment would benefit those lot owners and reduce dredging costs for the entire community it would be a win-win situation all around.

How many properties would be involved, and what will be required of those lot owners?

The South Beach consists of 16 Division-1 lots (the two southernmost lots are owned by LPCA) and about 23 Division-2 lots. (It may be impractical to rebuild the beaches fronting the 2 or 3 most-northerly Division-2 lots, those located closest to the jetty wall, as sediment deposited on those lots might wash excessively back into the central basin. We're still looking into this.) Every South Beach lot owner also owns the tidelands in front of their upland lot.

We will need all 37 lot owners' written permissions to work on their properties. We need every owner's permission since it is not possible to skip non-cooperating owners' beaches, to build up one beach area and leave an adjoining beach untouched. Just to run the pipe across their beaches we would need every lot owner's permission. Thus, other than for the few lots adjoining the south jetty area, every South Beach lot would have to participate.

We will ask the lot owners to sign written agreements with LPCA and the Div 234 Architectural Committee. The agreements will indicate that in return for the owner's cooperation LPCA and the Arch Committee will permit the beach nourishment and carry out the rebuilding work at our expense. The agreements will state that if all lot owners' permissions (and for Div-2 lots, also the necessary covenant amendment) are not obtained, the agreements are not effective.

What are you asking us to decide?

We ask South Beach owners to decide whether they want this beach nourishment done on their beaches. Think on this: Are the long-term benefits of having your beach rebuilt advantageous enough for you to endure the short-term inconveniences.

To summarize, beach nourishment would have substantial lasting advantages, especially for protecting bulkheads and keeping storm damage away from upland properties. There would be temporarily inconveniences: Use of the beach would be limited for some days or weeks, and for some longer while there would be clearly unpleasant odor.

We will dredge whether the South Beach is rebuilt or not. If all the South Beach owners consent to beach nourishment, that's what we'll do. If one or more do not consent, we will use open-water disposal.

For further information, contact

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