Richard L. Watson, Ph.D.
Consulting Geologist
P.O. Box 1040 Port Aransas, Tx 78373
(361) 749-4152 (253) 981-0412 fax
(361) 332-9720
TexasCoastGeology.com
Richard@TexasCoastGeology.com

10/20/05

Eddie R. Fisher
Director of Coastal Stewardship
Coastal Resources Division
P.O. Box 12873
Austin, TX 78711-2873

Dear Mr. Fisher:

Thank you very much for consideration of the report that I wrote about beach management on Mustang Island and Port Aransas. I appreciate your thorough reply. I have copied your message below and I will insert my comments in blue.

Sincerely,

Richard L. Watson, Ph.D.

Dear Dr. Watson:

Thank you for your email of October 13, 2005 regarding your concern of critical dune impacts resulting from beach management and road maintenance in Port Aransas. I have read your paper that you referred to in your email, and found it to be very informative.

Every year, the City of Port Aransas receives a disproportionately larger amount of seaweed than other areas of the Texas coast. Although we view seaweed in the beach and dune system as a potential resource that helps reduce beach erosion and build dunes, we also understand that too much of a good thing can become a nuisance. The usable width of the public beach appears to be decreasing due to the increasing area covered by sand and seaweed that has been stockpiled seaward of the natural dunes and the line of vegetation.

The usable width of the beach is unnaturally wide. Scraping of the beach in the road area just in front of the foredunes has held the dune line to only a short distance seaward of

where it was eroded in Hurricane Allen 25 years ago. If the coppice dunes and their vegetation had been allowed to naturally build seaward from the eroded dune face, the vegetation line would now be about along the seaward edge of the beach road at the present line of posts. So, actually the beach is unnaturally wide. Forcibly maintaining an unnaturally wide beach at the expense future dune growth is not a good way to protect our natural dune seawall.

Generally, activities for beach management should comply with the provisions of 31 TAC §15.7(l) of the Beach/Dune Rules that provides:

"(l) Maintaining the public beach. Local governments shall prohibit beach maintenance activities unless maintenance activities will not materially weaken dunes or dune vegetation or reduce the protective functions of dunes. Local governments shall prohibit beach maintenance activities which will result in the significant redistribution of sand or which will significantly alter the beach profile or the line of vegetation. All sand moved or redistributed due to beach maintenance activities shall be returned to the area between the line of vegetation and mean high tide. The General Land Office encourages the removal of litter and other debris by handpicking or raking and strongly discourages the use of machines (except during peak visitation periods which disturb the natural balance of gains and losses in the sand budget and the natural cycle of nutrients."

I have highlighted your quote from 31 TAC in red. I think that this is a pretty clear regulation which states that all sand shall be returned to the area between the line of vegetation and mean high tide, not to the surf. Most of the sand that is being trucked to the water at the present time is sand that has accumulated naturally in the road area just in front of the dunes. It accumulated by being blown up there from the lower beach and in some lesser cases deposited there by erosion of the coppice dune area during storms and re-deposited along the upper beach. It is mostly clean sand with no seaweed in it. Road graders have cleaned the road of loose sand by shoving the sand to the dune side (inland side) of the road where it has accumulated in a two or three foot high shelf of nearly pure sand. This has until very recently been trucked back and dumped into the surf as shown in the photos in my paper. This is clearly against the regulation highlighted in red above. It is all sand that is naturally trying to add to and build up the dunes.

Your paper states that the City's practices may reduce the protective functions of dunes, which is contrary to the Beach/Dune rules. The City of Port Aransas has time and again demonstrated that it is a good steward of the beach. I have instructed Ray Newby of the Beach/Dune team to contact the City to discuss altering beach maintenance practices in the manner you describe.

I agree that Port Aransas is trying to be a good steward of the beach. However, in the light of the terrible destruction wrought by recent storms elsewhere in the Gulf, it behooves us to allow the natural processes to build as high, wide and well vegetated natural dune seawall system as possible. The more sand stored in the dunes and the upper beach the better for the protection of the entire city, especially since the practices of the

past 25 years have severely limited seaward growth of the dunes.

Additionally, we have discussed three options for handling the large volume of seaweed on Port Aransas beaches and have the following comments that address each option separately:

1. Returning accumulated seaweed to the ocean. This proposal is acceptable, as this would keep any sand that is collected or accumulated with the seaweed in the beach and dune system. It is our understanding that sand and seaweed previously stockpiled seaward of the naturally occurring dunes would be returned to the surf zone. Our primary concerns with this method are the timing of the event and the disturbance of dune vegetation that occurs on these stockpiles. We suggest that the historically stockpiled material be handled after the close of hurricane season such that the protection afforded by the material in front of the dunes is not compromised. This timing would also limit the potential impact on sea turtle nests that may occur in the area. The action of removing the material from the stockpiled area should be done incrementally such that any landward cut into the material is not perceived as materially weakening of the beach and dune system. We also request that dune vegetation growing on the seaweed stockpiles be retained where feasible to aid in the re-vegetation of any bare scarps that develop as a result of the seaweed handling activities.

If seaweed stockpiles are to be returned to the sea, then they should probably not be placed in the coppice dune nursery area where the dunes naturally propagate in the seaward direction and where new dune vegetation grows. If they are placed in that location and then removed, the process will necessarily destroy the new vegetation and prevent growth of the dune ridge and the coppice dunes in front of it. Transporting windblown sand from the upper beach and dune system back to the surf is a very bad procedure and is contrary to your regulation in red above.

2. Off-site storage and return to the natural system. This method is also acceptable as long as the natural system is the city's beach and dune system. Our main concern is that any sand collected with the seaweed and transported off-site is returned to the beach and dune system.

3. Collection and reuse. This method is acceptable if it can be demonstrated that sand collected with the seaweed is either separated from the seaweed during initial collection on the beach or returned to the beach at some point during or after the compost or mulching process.

I am not a botanist, but I suspect that total removal of the seaweed from the beach and dune system is a bad idea. It seems to me that it is likely that the seaweed is the primary nutrient source for the dune vegetation, especially the new pioneer vegetation on the upper beach in the coppice dune area. I wonder if the vegetation could be disked in place to bury it to rot where the wind and water would eventually erode it to blow inland to nourish the dune vegetation. In any case, it would be desirable to find a way to save these

nutrients and still have a good tourist beach. This is a much smaller problem than preventing the natural seaward growth of dune vegetation and seaward propagation of the dunes.

We appreciate you taking the time to share your concerns. Please contact me at (512) 463-9215 or by email at eddie.fisher@glo.state.tx.us, or Mr. Ray Newby at (512) 475-3624 or by email at ray.newby@glo.state.tx.us if you have any questions or need additional details on this matter.

Sincerely,

Eddie R. Fisher
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