

Dear Mr. Bowsza,

I would like to enter the following testimony in to the record of the hearing that I understand the Environment Committee will hold tomorrow, Monday, March 7th. Unfortunately, I will not be able to attend. Can you help me, enter my one page of written testimony? Can you email the proper title/format for my testimony which I will return to you for submission. If I need to provide you with multiple copies, I am hopeful that Mr. Knight, whom I know, might be able to help me with my effort. I am sorry for this last minute request, but I did not learn of the hearing until late last Friday.

Thank you for your help,

Bob De Santo

My testimony follows.

Members of the Environment Committee, for the record my name is Robert S. De Santo, Ph.D. I live in Waterford and this is my testimony in support of H.B. No. 1114, *AN ACT REVISING THE DEFINITION OF TIDAL WETLANDS AND THE HIGH TIDE LINE*.

I am the owner of, and Principal Scientist at, the Institute of Environmental Stewardship, LLC, and, as an avocation, I serve as President of the East Lyme Public Trust Foundation, Inc. While Chief Scientist for the Parsons Corporation between 1977 and 2004, I served several years there as its Chief Scientist specializing in coastal zone ecology and matters pertaining to coastal zone management. As Principal Scientist at the Institute of Environmental Stewardship, I dedicated much of my time to projects in Connecticut that hinged on determination of the extreme high water line at various locations in the state. Most recently, I spent many days arguing this issued to no avail in a DEP Adjudication Hearing in 2007 challenging the present DEP arbitrary, unscientific definition, and its misunderstood perception of tide variability and coastal ecology.

Proposed Bill 1114 is now clearly tied to the tidal source data documented in the 2001 tidal epoch approved by the National Oceanic and Atmospheric Administration, as it should be and as I argued for it in 2007. The proposed Bill 1114 is far better than the present one with one major caveat -- the specification of "**one foot above local extreme high water**" [Sec. 2. Subsection (a) of section 22a-30 of the general statutes] remains arbitrary and unscientific. If the state wishes to extend its jurisdiction by some distance above the local extreme high water for ecological reasons, it should do so by specifying a "buffer" based on **a percentage of the local tidal range**, which would then be added to the local extreme high tide elevation as derived from the NOAA predicted tide tables at: [http://tidesandcurrents.noaa.gov/tide\\_predictions.shtml?gid=57](http://tidesandcurrents.noaa.gov/tide_predictions.shtml?gid=57). The ecological basis for my position is that imperially determined tidal ranges (i.e. actual and true tidal ranges) vary according to the submarine topography of the coastal area that defines the continental shelf and the geomorphology of the coastline. This explains the difference between the 40 foot tidal range in Newfoundland as compared to the three foot tidal range in New London. In light of that scientifically definable variable (i.e. the site specific tidal range), it makes no ecological sense to argue that adding an arbitrary one

foot buffer to the landward extent of a tide in Newfoundland is logical or appropriate. It is equally inappropriate and unscientific to apply a one foot buffer in New London. The Canadian buffer is 2.5% of the tidal range there while the New London buffer is 33% of the tidal range there. The fundamental science of tidal wetland ecology tells us that the dominant factor determining coastal ecology is the tide -- regular inundation by salt water.

Therefore, when the state seeks to protect its coastal tidally supported ecological resources, including tidal wetlands, it must recognize that going above the local extreme high water, extends its jurisdiction into resources outside the tidal wetlands in question and that doing so must reflect a REASONABLE and appropriate conservatism. Therefore, in my expert opinion, the state should adopt a 10% buffer, which is reasonable and appropriate to satisfy the coastal zone ecology at stake. A 2.5% buffer is too small. A 33% buffer is too large. Arbitrarily picking a buffer, such as the "one foot" proposed in Raised Bill 1114, invites legal challenge in the same manner as does the present arbitrary, unscientific existing definition used by the state, which has cost all parties drawn into its debate much money, effort, and frustration over the years.

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