

2013, March 8

To the Environment Committee, Connecticut General Assembly

Re: Raised Bill No 1014 An Act Concerning the Definition of "Rise in Sea Level".

I wish to express my concerns regarding the proposed wording of this bill which are as follows:

1. Since the phrase "rise in sea level" may have both historic and prospective meaning depending on context; it would be preferable to create a separate term such as "**projected sea level rise**" to distinguish it from historical or current sea level rise, and to be used specifically in the context of contingent planning for future events.

To create to separate and explicit terms will achieve greater clarity than to have one term serve two purposes depending on context.

2. Whereas the proposed legislation defines the projected rise as "two to five inches per decade", it would be preferable to specify a planning horizon of 2100, and a conservative (worst case projected rise based on accepted science) that is anticipated at that time. I would recommend an anticipated sea level rise of 4 feet by 2100 as a target guide for strategic land use planning, zoning and building regulation, based on current scientific and governmental projections as they might relate to Connecticut.

The reasons for this are as follows:

- 2.1 Governmental and private land use decisions frequently involve infrastructure with useful life of 25 to 100 years. We are making decisions in the present about assets and public health and safety exposures that will project into the long term under contingent scenarios.
- 2.2 While current climate change projections offer a range of possibilities as to total sea level rise within a planning time horizon, and the rate of rise over that horizon, conservative, prudent planning should anticipate the worst case that will produce least exposure than allow best case and risk avoidable exposure. Worst case can be relaxed at some future time if actual events do not corroborate projections. Optimistic scenarios discredited by actual experience will incur a greater cost.
- 2.3 A two inch per decade rise in sea level over the remainder of this century will produce an 18 inch sea level rise by 2100. A five inch per decade rise in the same period will produce a 45 inch rise by 2100. These projections comport with the range of possibilities suggested by various scientific and governmental organizations. But the two inch per decade scenario assumes an aggressive reduction in the production of greenhouse gases, and there is currently no credible basis to assume that scenario is attainable in the foreseeable future, The five inch scenario reflects a business-as-usual posture for which there is ample current evidence.

- 2.4 The wording of the proposed language suggests that planners will be allowed some discretion regarding their choice of level of sea level rise; i.e., they may choose a level between two and five inches per decade for planning purposes. If this is the intent of the legislation it is misguided. The State should bring its best scientific assessment to bear in choosing an anticipated level of rise, and set that as a standard to avoid inconsistencies in planning assumptions among municipalities, private entities and the State. Governmental entities which choose a more optimistic projection should bear the burden, and possibly the liability, of justifying their choice.
- 2.5 To express the measure of sea level rise in terms of inches per decade ignores the possibility that in the next decade the increase could be less than two inches, and in the latter decade it could be greater than five inches as climate forces build momentum. To express a target increase at the end of a planning horizon is probably more reliable and defensible.
- 2.6 I am aware that there is some discussion regarding whether this definition should only apply to strategic land use planning processes as an advisory tool, or whether it should be recommended for use by Planning and Zoning authorities and other appropriate agencies in regulatory standards. I recommend that the definition, if effectively calibrated and scientifically supported, be used to guide regulation, and that agencies which elect to deviate bear the burden of justification.
- 2.7 It should be noted, by way of example, that the US Navy has projected that by the year 2100, if sea level rises by three feet (36 inches), it will have \$100 billion of infrastructure at risk. I presume that the 3 feet cited is a global average, as the Navy is a global enterprise, and does not necessarily take into account the recent projection of the USGS that the US east coast may experience a yet higher rate of rise.

Respectfully,

Sidney F Gale

Sidney F. Gale
Biographical information

Sidney F. Gale, CPA, MBA, CGMA, conducts a consulting practice focusing on business strategy, management controls and project management.

He has served the Town of Guilford on its Economic Development, and Planning and Zoning Commissions, and chaired its Transportation Planning Committee. He has actively promoted sustainable growth strategies and strengthening of regional planning processes. He has served on the Town's Energy Task Force, and has been an advisor to its Hazard Mitigation and Pre-disaster Planning Committee on issues of climate change and transportation. During his leadership of the Town Center South Planning Committee in 2004, he convened a regional conference of municipal officials to explore the implications of Climate Change on land use policies relating to shoreline development.

Mr. Gale has given presentations on planning for the impacts of Climate Change to various civic and governmental groups in the Northeast and has testified before the Connecticut Joint Legislative Committee on the Environment regarding bills promoting methodical, science-based processes for assessing the impacts of Climate Change and developing strategies for adaptation and mitigation. He has also testified in favor of expanded integrated public transit systems for Connecticut.