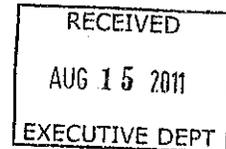


12877 Manzanita Road  
Bainbridge Island  
Washington 98110  
206-842-0709

15 August 2011

Bainbridge Island Environmental  
Technical Advisory Committee members



**Re: Ties among shoreline stressors and habitats**

You may recall my use of Bainbridge shore inventory data in examining the null hypothesis that human-installed stressors (bulkheads et al) are not negatively correlated with habitat measures. Statistical analyses repeatedly showed that the hypothesis could not be rejected. Not for individual stressor-habitat pairs nor for composite scores for all stressors and all habitats, which scores were devised by Battelle. The findings were supported by three peer reviews.

An attack on my approach and thus my results was conducted and widely distributed by James Brennan. Now that he is a member of ETAC I invite Mr. Brennan to employ any statistical method of his choosing, with oversight by ETAC, to assess the relationship between stressors and habitats around Bainbridge Island.

The underlying data, including the composite scores, can be gathered from Appendixes C and D in Battelle's 2004 "Characterization and Assessment". Using that data I have enclosed two plots. One relates composite habitat scores to composite stressor scores. The second relates the composite habitat scores to bulkhead presence. These figures are the basis for my no-relationship hypothesis.

As a matter of interest I enclose a similar figure from Battelle's East Jefferson County analysis, published last year in *Environmental Management*.

I look forward to Brennan's results, preferably before ETAC's attention is drawn away from nearshore matters. If Brennan finds near-zero correlations they may encourage inquiry into a number of other, natural-system relations.

  
Donald Flora

FIGURE 1

Habitat Relationship to Stressor Levels in 201 Bainbridge Island Reaches

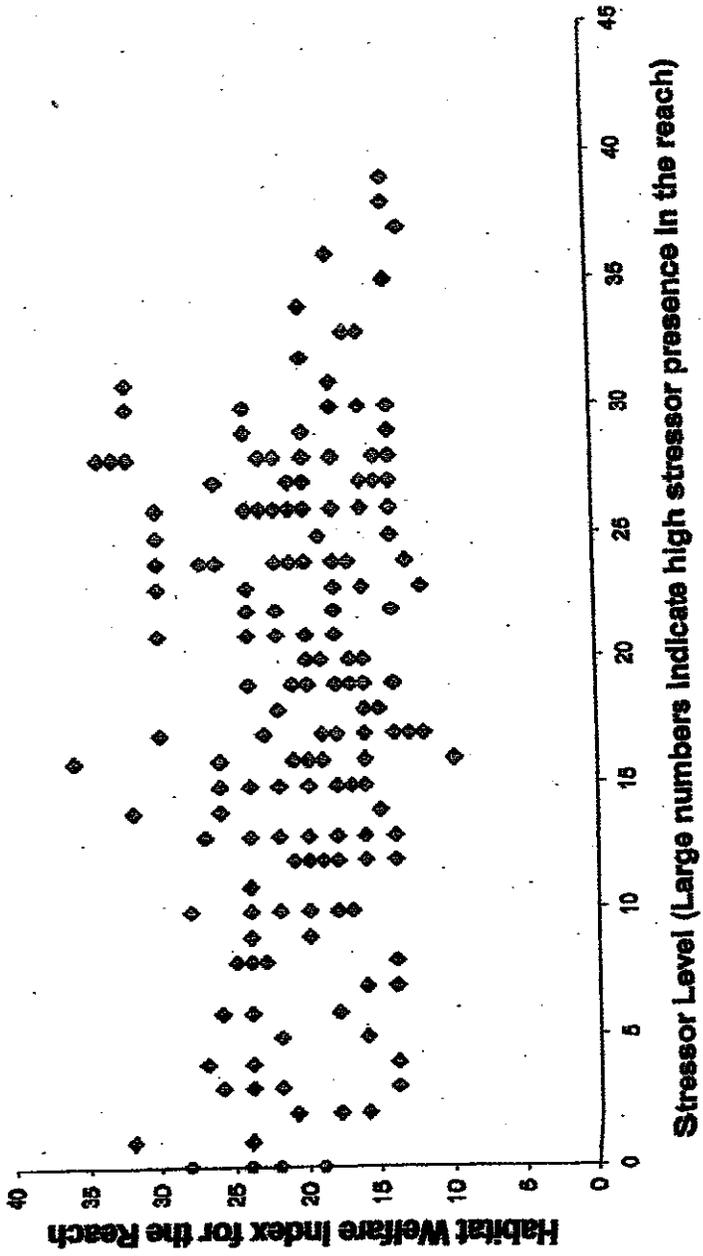


FIGURE 2

Habitat Relationship to Bulkheads in 201 Bainbridge Island Reaches

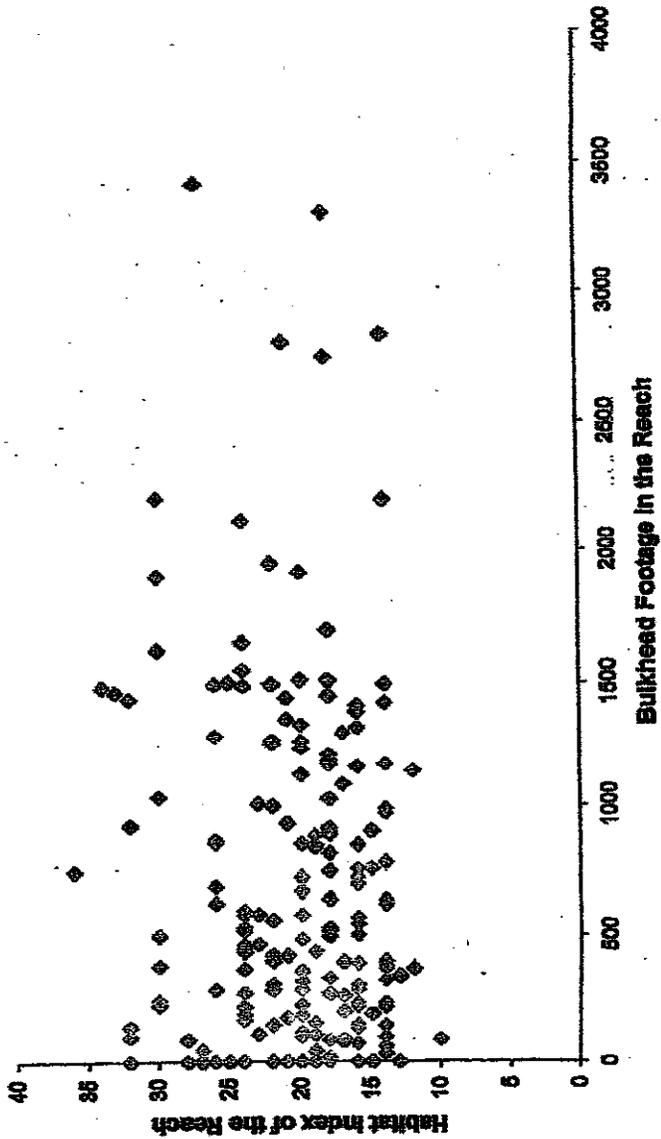


FIG. 3 E. JEFFERSON COUNTY

**Fig. 7** Scatterplot of stress and function for sites at the SZU scale shows the relative impairment of sites with low, medium, or high function to assist in prioritizing restoration at the site scale. The matrix indicates three equal bins for each range

