

5 September 2011

COMMENTS ON HERRERA 8/31/11 MEMO RE 30-FOOT BUFFERS

The cited review literature includes no Puget Sound studies nor even tidewater studies.

None of the cited literature is a research study.

None of the "Riparian buffer functions and width recommendations in the literature" (Table 1) is expressed in amounts. Percentages almost invariably apply to 'pollutant' flows that are very large relative to residential amounts.

The SPTH-related figures overstate buffer widths by one-third: FEMAT distances were based on 150-foot, not 200-foot tree heights.

The relevance of residential contributions of sediment, shade, woody debris, and nutrients to marine welfare has not been demonstrated for the Island nor Puget Sound. These issues and their solutions are borrowed from stream science and distorted to varying degrees.

Upland-sourced detritus feeding (page 3, bottom, referring to vegetative matter) is almost totally irrelevant to Puget Sound salmon and forage fish, as reported in four diet studies. This contrasts sharply with (freshwater) riparian studies. Puget Sound fish are indifferent to plants' nativeness.

Years ago I knew James Karr, senior author of a paper cited by Herrera. That paper focuses on Midwestern farms' effects on headwater streams: sediment, channelization, and temperature increases induced by nearstream vegetation removal. Karr-Schlosser alludes to the natural tendency for disturbed ecosystems to return to equilibrium. Not a word can I find about non-native plants nor their unacceptability to stream biota (Herrera page 3 bottom). Nor does the paper point toward 30-foot buffers.

I don't find in Herrera 8/31 the clear rationale for the thirty-footer that I believe the Council sought. The whole segment on nativeness seems irrelevant to buffer width. Perhaps what is needed is a stronger rationale for the bank-top *native* veg that requires special protection. Thirty feet of it.

The rationale should certainly include enumeration of what vectors and substances have been experienced and thwarted by Bainbridge or Puget Sound residential buffers, or at least Herrera's expectations about those matters. And, of course, seasonal quantities. Those things have been estimated for parts of Hood Canal, though there are reasons not to extrapolate them directly.

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