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Title: Applying the concept of *Independent Applicability* to results from the National Aquatic Resource Surveys

Abstract: The assessments resulting from the National Aquatic Resource Surveys have taken the tact of basing estimates of resource condition on the biological indicators of quality. The physical habitat, chemical, hydrological, and watershed indicators are used to evaluate the relative ranking of anthropogenic stressors impacting the biota. In a more regulatory context, EPA has long supported the concept of independent applicability of data in making decisions about use attainment. Here we evaluate the difference in these two approaches and the impact of independent applicability approach on NARS results. For example, the 2004 Wadeable Streams Assessment estimated 41.9% of the stream length in the lower 48 states to be in poor condition based on a macroinvertebrate index of biotic integrity. Assessments just based on nutrient data (total phosphorus and total nitrogen) would have estimated 30.9% and 31.8% of stream length in poor, respectively. If a site was in poor condition for any of these three indicators, the final assessment would have been 58.8% of stream length in poor condition. The presentation will introduce other indicators from the survey including the physical habitat data and regional differences in results. Implications of these findings for national assessments will be discussed and reasons for the differences discussed.

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