

To: Michael Donlan, IEC and Eric English, NOAA

From: George Parsons, University of Delaware

Subject: Comments on "The Athos/Delaware River Lost Use Valuation Study"

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I have completed my final reading of "The Athos/Delaware River Lost Use Valuation Study." It is a good benefit transfer analysis based on well accepted principles of economic valuation. The study design for the transfer is good and the estimated numbers strike me as reasonable based on similar applications in the past. In general, I would have preferred to see a transfer using values from a collection of studies more closely approximating, even including, the Delaware River, but such studies do not exist. This is the lament of many benefit transfer applications. In the final analysis, I believe the working group's decision to use the Rosenberger and Loomis (2001) values was a good one.

The use of on-site/post-spill surveys to estimate the response to the spill was a good methodology and was well executed. The sampling of sites was sensible, the correction for frequency of use was correct, and the questionnaire design looked fine. The magnitude of the spill response in terms of lost, substitute, and degraded trips were quite plausible. The hunting values were the most defensible, and the boating values the least defensible. The hunting values were based on a random sample, have corroborating evidence for the change in trips, and even have a supporting local study. The boating estimates were based on a rather small sample, touch on marinas only, and relied on a participation rate based on one day of observation. On the whole, I am quite satisfied with the analysis. It is a well designed and well executed.

Still, I think there are two issues that deserve some further thought. They are conceptual and related. They may change how you compute the losses. The first is concerned the use of the 20% rule for 'degraded' trips. We talked about this earlier. It is entirely possible for a loss associated with a 'degraded' trip to equal or even exceed the loss of a 'substitute' trip or a 'lost' trip. Compare a person who has no reasonable nearby substitute with one who has a good, perhaps close, substitute. The former may easily have a larger loss while continuing to visit the degraded site. This reasoning runs counter to the reasoning in your analysis. Is there a good analytical explanation? Or, do 'degraded' trips deserve higher value? Chapman and Hanemann (2001, p 28) use the 20% rule, but they don't really explain why.

Second, does a problem arise because you are transferring single site 'access' values to a quality change? Consider Diagram 1 below. Let the line be a single site travel cost model. The per-trip loss for an individual in such a study is computed as the area A divided x^* , where x^* is the number of trips taken in a season. I believe this number (averaged over the sample) is used by most of the studies in Rosenberger and Loomis. However, when there is a quality change (demand curve shifts inward), like that on the Delaware River, the correct per-trip value should be the area C divided by $x^* - x^{**}$

for 'lost' (and 'substituted') trips and B divided by x^{**} for 'degraded' trips. Using this reasoning, all trips show some lost value, 'degraded' per-trip values are larger than 'lost' per-trip values, and the per-trip values from access value studies overstate 'lost' trips and may under or overstate 'degraded' trips.

