

## Habitat-Specific Estimates of Fisheries Ecosystem Services in Weeks Bay Alabama

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One of the challenges EPA is addressing as part of its Ecological Services Research Program (ESRP) is linking ecological services (ES) of coastal and estuarine habitat types (e.g. fishery support, nutrient processing, carbon sequestration, etc.) with economic values to inform stakeholders and environmental decision makers of the value of coastal landscapes. For fisheries, a primary need has become the identification of data gaps that limit our ability to derive these economic linkages and develop practical tools for communicating the distribution of ES values to resource managers. Here, we examine the feasibility of synthesizing a combination of fishery monitoring data, habitat distribution and a nekton vs. habitat abundance study to evaluate fisheries support in Weeks Bay. The ES selected were the commercial fishery for blue crab (*Callinectes sapidus*), and recreational fisheries including shrimp netting for brown shrimp (*Farfantepenaeus aztecus*) and white shrimp (*Litopenaeus setiferus*) and sports-angling. The habitats evaluated were fringe marsh (*Juncus roemerianus* and *Spartina alterniflora*) and shallow non-vegetated sediments. ES values were calculated using benefit transfer. Relative values for each fishery were assigned to the two major habitat types based on nekton-habitat affinities calculated from drop-trap sampling in spring and fall of 2007. Habitat specific monetary values were calculated based on the relative values and area of each habitat type. Service values were mapped for each habitat type within the estuary. While it was possible to estimate first-order ecosystem service values for the dominant habitat types, these estimates were based on the habitat preferences of sub-adults and do not take into account ontogenic shifts in their habitat preferences. Better knowledge of the relative contribution of each habitat type to production of harvestable adult as well as localized primary economic research could lend increased confidence in the results.